

The *Afrikamütze* Database

A guide to the identification, context
and interpretation of the German army
tropical peaked cap, 1940–43

Part 1: The Authentic Cap

by
Mike Seager Thomas

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NOTES/CORRECTIONS

Pages 8–9, table 1.1

As of 071224 additional confirmed manufacturers include:

Franz Richter & Söhne Dresden A1

H. Schade Kassel

Gebr. Stetter Pflungstadt

0/0381/0048

0/0471/0050

0/0671/0036

0-1035-0018

1-1007-5851

and 0/2009/0004

The identification of a single plausible Clemens Wagner remains in doubt (see Appx 3, 212–13).

Pages 13–14, table 1.2

Franz Richter & Söhne made 1_OR and possibly 3_OR caps in 1942.

H. Schade made 4_OR caps. It did not date its caps.

Gebr. Stetter made 4_OR caps in 1942.

0/0381/0048 made 4_OR caps. It did not date its caps.

0/0471/0050 made 4_OR caps. It did not date its caps.

0/0671/0036 made 4_OR caps in 1943.

1-1007-5851 made aberrant 4_OR caps in 1943 (see note below).

0/2009/0004 made 4_OR caps in 1943.

Page 55, note 3

“A handful of possibly authentic caps... have red twill linings, steel ventilation eyelets and, in several cases, sweatbands wholly of brown leatherette”. Several caps with *green* linings, steel ventilation eyelets and leather sweatbands, one dated 1943, are related to these caps by their similar morphology, and in one case, a shared RB number, 1-1007-5851. It is my view that these caps are authentic, and probably by two different manufacturers, 0-1035-0018, caps belonging to which are dated 1944, and 1-1007-5851. Their authenticity, however, continues to be disputed by some commentators.

Page 56

“On the underside of the peak of the tropical peaked cap, running around its curved outer edge, there are *always* one or two lines of machine straight-lock stitch”. As of 071224, I know of two possible exceptions out of c. 540 caps.

Page 76

“Though in production from 1940 to 1941 only... Lubstein is the best represented manufacturer in the *Database*”. Since this was written, a single (possible) 1942-dated Lubstein 1_OR tropical peaked cap has come to light. Where original, this cap shares most of the characteristics of 1940/41-dated Lubsteins.

THE *AFRIKAMÜTZE* DATABASE, PART 1:

THE AUTHENTIC CAP

This essay, the third of four describing and contextualizing the faking for profit of *Afrikakorps* material culture (Seager Thomas 2015; 2018; 2019, pt 2 & appxs), is intended to assist students in distinguishing real from fake material, and demonstrate in a practical and lasting way how our knowledge and understanding of these can be augmented by a contribution from academia, the analytical approach of which *should* be more systematic, more disciplined and more open than that of the average lay enthusiast. Its focus is the German army tropical peaked cap, or, for those who wore it in the North African theatre between 1941 and 1943, the *Afrikamütze* (McGuirk 1987, 140). I acknowledge that little of it is original research and that many of the observations I have made and the inferences I have drawn have already been made and drawn and at least *asserted* elsewhere by members of the collecting community. But to the best of my knowledge, the data and the conclusions drawn from it have not previously been presented as a single coherent whole and certainly have not been available as such to the wider interested community.

I should note at the outset that many collectors are opposed to such syntheses because they help fakers to make better fakes. In the first essay of this series, I characterized this as a issue of personal philosophy: some of us believe in freedom of information and are prepared to pay the price for it, while others of us are prepared to sacrifice freedom of information in order to avoid paying the price (Seager Thomas 2015). At heart, the choice is one between the openness of science and the closed-shop of the guild. I still consider this to be true. But in this case there is in fact no issue to address since the data about which these collectors are so sensitive and most of that from which I have drawn on for this essay is already freely available in print or online. It is not me who is helping the fakers; on the contrary, it is my critics, who keep knowledge to themselves that would assist us in identifying fakes!

The WW2 German army tropical peaked cap is a cotton-twill cap with a prominent peak, a false turn-up with a scallop at the front, a red lining, a pair of metal ventilation eyelets on either side, each of which was riveted through the cap onto a countersunk washer on the inside, and, after early 1942, a sweatband. The manufacturer's name and later a manufacturer number was stamped on the inside. Insignia consisted of separately applied tropical army eagle and cockade and, at least till July 1942, when its use was ordered discontinued, a coloured soutache or inverted chevron indicating the wearer's branch of service. The standard officers' version was piped around the scallop and the top of the cap in silver. The General officers'



version was piped around the scallop and the top of the cap in gold (see **Appendix 1**).

It is known as the tropical peaked, visored or field cap, the M40 or M41,¹ *la casquette tropicale du modèle 1940*, the *Tropenfeldmütze mit Schirm* (*Mütze mit Schirm* in the *Soldbuch*) and the *Afrikamütze* (literally Africa cap) and was worn during the 1941–1943 North African campaign by both German army and *Luftwaffe* personnel (**Figures 1.1 & 1.2**). Period photos show it in use on Crete and possibly the southern Soviet Union from as early as 1942 (**Figure A1.12**), and in other hot weather regions in which the *Wehrmacht* was deployed—Italy, other parts of the former Italian occupied Mediterranean, and definitely the southern Soviet Union—from 1943 (**Figures 1.3**) (cf. Thomas 2002, 92, 228). It is currently unclear if the army tropical peaked cap was worn by *Luftwaffe* (as opposed to army) personnel outside North Africa, or not.

I picked it to study over many other surviving types of WW2 material culture for a variety of reasons. The study of material culture is central to a full understanding of the people and cultures who made and used it, and for many of us, it provides a potent link to the past. This applies irrespective of the type of material concerned—Roman pottery, scrimshaw, theatre memorabilia, military antiques. But for the student of WW2 material culture, the German army tropical peaked cap—and in particular the *Afrikamütze*—offers something in addition. It is what a museologist today would describe as a “charismatic object”, potent less for what it is than for its associations, in this case what is widely perceived to have been “romantic” military campaign (Seager Thomas 2018, 2–3). The result is that it is much sought after, has become valuable, is widely faked, and useful pictures of it are frequently posted online and discussed by collectors eager to share their possessions and knowledge, or seeking reassurance that their caps are authentic and charismatic. Issue tropical peaked caps, moreover, were factory-made by a small number

Figure 1.1

The WW2 German army tropical peaked cap—or *Afrikamütze*—in the desert. 1–5 & 9: other ranks caps; 6–8 & 10: officers’ caps. Much of interest can be gleaned from photos such as these. The cockade on the cap to the left of (1) was applied using machine straight-lock stitch and that on the cap to the right by hand. Most likely therefore they are by different manufacturers. The caps in (1), (2) and (4) are model 1_ORs (for different cap models see pp. 25–32). This is indicated by their soutaches, the ends of which are cut into the brow of the cap, a feature associated exclusively with this model of cap. The caps in (3) and (5) lack soutaches and the photos must therefore date from July 1942 or later. The relatively low profile of (3) suggests that it is a late cap. Assuming they are issue caps, the officers’ caps with soutaches in (6), which shows Generals Crüwell (right) and Neumann-Silkow (left), should be by Robert Lubstein (model 1_Os or 1_Gs), since Neumann-Silkow was killed before the introduction of the cap models that succeeded these. Those in (7) and (8), are also probably Lubsteins, as they are of the correct shape and like Lubsteins appear to be without sweatbands. *Photos: author’s coll.; eBay*

of manufacturers, whose products differed from each other slightly and changed over time, allowing them to be distinguished from each other (and from modern reproductions) and placed chronologically and in their context of manufacture and use. Finally, contemporary records of them are few. There are no detailed pattern books or catalogues, just period photographs, of which there are many (e.g. **Figure 1.1**), and a handful of captured military edicts (see Bender & Law 1973). We do not even have a period list of manufacturers. To the student of material culture, therefore, everything they have to say, they must say for themselves.

For this essay and the accompanying *Database* (**Digital Appendix 1**), my principal sources are a handful of caps in British military museums, sold at auction and in private collections, which I have handled, and many thousands of detailed photos of caps in print (in Borg & Twiname 2010; Figueroa 1996; Fisher 2011; Kurtz 2004; McGuirk 1987), posted online on the *Afrikakorps Forum*, the *War Relics Forum* and the *Wehrmacht Awards Forum*, and shared with me personally by collectors and dealers in military antiques. From these and a handful of other sources, I have gathered together data on 340-odd authentic, though in many cases modified, German army tropical peaked caps belonging to five different models, dating from 1940 to 1943. For the text, I have additionally drawn on many personal communications from collectors of WW2 German army tropical uniforms and equipment, written observations made on the three forums, and in Roger Bender and Richard Law's (1973) *Uniforms, Organization and History of the Afrikakorps* and Dal McGuirk's *Rommel's Army in Africa* (1987), though where possible I have gone back to the *Database* to confirm these.

For each cap, I have distinguished up to 30 variable traits (**Digital Appendix 1; Tables 1.1, 1.2 & 1.4–1.8**). These traits are grouped and discussed and the *Database* used: firstly, to identify several different sets of traits characteristic of different cap dates and models; secondly, several sets of traits characteristic of different cap manufacturers (into which are placed a number of undated and/ or unnamed caps); and lastly, a number of non-conforming traits and sets of traits, some *possibly* attributable to contemporary industrial or field adaptation, some *probably* to a source different to that of the other caps in the *Database* (a minority cap manufacturer and/ or a theatre of operations outside that which has supplied Western European and US collections and museums), and some *definitely* to subsequent modification, restoration and faking (see Part 2).

¹ "M40" (model 1940) refers to the earliest date in these caps, 1940; "M41" to their earliest use, 1941. A 1942 date-stamped cap will still be described by collectors as an M40 or an M41. It has been suggested that caps with sweatbands, which first appeared in 1942, should be re-designated "M42" (model 1942) caps. This has not happened. E41, F42, M43, M44 etc. stamped in some later caps designates issue depot (E = Erfurt; F = Frankfurt; M = München) and the cap date, and has nothing to do with cap model.



ANALYSING THE AFRIKAMÜTZE

How do I know that all the caps I have included in the *Database* are authentic, and the inferences that I, and others, have drawn from them are correct? No doubt not all of them are.

Some caps have a documented veteran provenance (**Table 1.3**). For the remainder, their identification rests upon comparison with these, and “feel”, which though difficult to quantify—and therefore verify—is also very difficult to imitate convincingly. Not all caps, however, will conform to our expectations. There are recorded issue cap variants by known manufacturers (McGuirk 2014a), as well as custom-made and period customized caps. More manufacturers of tropical peaked caps than those represented in the *Database* are *reported*. Additionally, plausible fakes circulate widely, from restorations of authentic caps, through modifications (e.g. late caps modified to make them look like they were used in the desert), to fakes, made from scratch in order to cash in on the high prices realized by the real, unmodified thing) (see Part 2). So too does

Figure 1.2

Afrikamützen worn by *Luftwaffe* troops in North Africa. The *Luftwaffe* sleeve band in the lower photo, which was introduced early in 1942, shows that the use of *Afrikamützen* by *Luftwaffe* troops continued after the introduction of the *Luftwaffe* “tropical” uniform. Photos: author’s coll.; H. Schnitzer; H. Schlösser



misinformation. All identifications therefore must be treated with caution. For the majority of caps, however, close study is usually sufficient to distinguish the real from the fake. If a cap closely matches one of the verifiable few, the odds are that it is real; but to identify this match with certainty, we have to compare the two very closely.

This is where the *Database* comes in. By collating the characteristics of a range of caps of different dates by different manufacturers, it helps us to do just this.

Because they conform to an official design, all surviving issue tropical peaked caps are of course similar. In fact, however, there were always marked differences between caps produced by different manufacturers and caps manufactured at different times, as well as those that result from differences in their use histories. These differences are central to the functioning of the *Database* as an interpretative tool, for, in combination, they are diagnostic of these manufacturers and dates of manufacture, and of use history. Broadly these differences are divisible into cap manufacturer,

Figure 1.3

The German army tropical peaked cap worn in theatres outside North Africa. Top: southern Italy (the sign points to Matera in Basilicata). Upper middle: the Caucasus (late 1942 or 1943). Middle: southern France (1944). Lower middle: an unknown location in the south of the Soviet Union. Bottom: the Peloponnese, Greece (1943). Note the late, unofficial retention of the *soutache*. Photos: *author's coll.; eBay; unknown*

cap date and history, cap form, cap insignia and cap structure. Cap name can be further divided into cap manufacturer and manufacturer number; cap date and history, into date stamp, wear/patina, modification and provenance; cap form, into model and rank type, and cap crown and peak shape; insignia, into eagle, cockade and soutache type; cap structure into fabric type and colour, cap sewing, eyelet colour, material and fixing and insignia application. Though not all of these are distinguishable in the photos of all the caps I have reviewed, where they are, I have included them in the *Database*. Their exact nature is detailed below.

Given a complete dataset, using these variables, most individual German army tropical peaked caps can be identified with a particular manufacturer (**Appendix 2**). A cap by Carl Halfar *cannot* be confused with a cap by Robert Lubstein (**Figures 1.15, 1.43–1.45 & 1.48–1.51**); an authentic 0/0250/0906 cannot be confused with an authentic 0/0843/0008 (**Figures 1.75 & 1.82**), etc. The difficult caps—real and fake alike—are the aberrant ones, which have nothing or only very little against which they can be compared, and those for which we have only an incomplete dataset. These have to be decided upon on a case-by-case basis by comparison against the record as a whole.

Figure 1.4

Manufacturer stamps in the German army tropical peaked cap, 1940–43. Top: Schlesische Mützenfabrik. Upper middle: Robert Lubstein. Lower middle: Gebrüder Alm. Bottom: 0/0496/0340. Photos: author; eMedals; Dal McGuirk; WAF



| Database code | Name | Manufacturer location | Other information |
|---------------------------------|---|---|--|
| <i>Manufacturer name/ stamp</i> | | | |
| ALM | GEBRÜDER ALM | Berlin C2 | date stamp |
| BMF | B. Mü. F. or Bayer. Mützen-Fabr. [Bayerische Mützen-Fabrik] | München | M/42, M/43. Another unreadable stamp in 1942 |
| BERG | Erich Bergmann | Ebersdorf | date stamp |
| BERL | Berlago | Berlin | Jahr (date stamp); Größe (size stamp) |
| GRE | Greiling & Co Felina Frankfurt | [Felina Frankfurt] Frankfurt a. M. | no date stamp |
| GRO | Georg Grote | Hanover | date stamp |
| HAL | Carl Halfar | Berlin N20 Prinzenallee 74 or Berlin N20 | date stamp |
| HÄU | Mützen-Häussler | BERLIN | date stamp |
| HUB | Aurel Huber | Lindenberg | M/43 |
| KER B | Bruno Kern Mützenfabrik | Fernruf 338 Lunzenau (Mulde) | date stamp |
| KER E | <u>Ernst</u> Kern Mützenfabrik | Lunzenau/Mulde | no date stamp |
| KUB | Karl Kubach Mützen-Fabrik | Mainz – Kastel | F42, 43 |
| KUR | Kurtze & Storckmann K.G. | Berlin C2 | date stamp with month and year |
| LAG | Lago | Berlin | Jahr; Größe; workshop number |
| LMD | Landes – Lief. – Genossenschaft Kürschner und Mützenmacher | Mitteldeutschland | date stamp with month and year or no date stamp; boxed workshop number |
| LUB | ROBERT LUBSTEIN | BERLIN NO 55 or BERLIN N.O. (very rare) | no date stamp (early); date stamp (later) |
| MAY | Mayser-Milz | Lindenberg | M43 |
| MFD | Mützen-Fabrik Dreßen | [Dreßen] Rheydt | F42 |
| NAU | Karl Naubert Mützenfabrik | Erfurt | unknown |
| OBE | H. u .W. Obenhack | Karlsruhe Amalienstr 31 | M1942* |
| OTT | OTTMAR REICH | Lindenberg | M43 |
| RES | Resolut | | F42 |
| SCHEB | Emil Schebeler | gegr. 1870 Berlin NO 55 Immanuelkirchstraße 6 | no date stamp (presumably early caps); date stamp (later caps) |
| SCHEL | August Schellenberg Uniformmützenfabrik | Bromberg | date stamp |
| SMF | SCHLESISCHE MÜTZENFABRIK | FRANKENSTEIN | logo; no date stamp (early); date stamp (later) |
| SPE | Jacob Sperb Uniform-Mützen / Militär-Artikel | Regensburg | no date stamp; other details unreadable |

Table 1.1

Known stamps. Unconfirmed manufacturer names and numbers include Franz Richter & Söhne Dresden A1 and Clemens Wagner Braunschweig Hamburg (see **Appendix 3**)

| Database code | Name | Manufacturer location | Other information |
|---------------|--|---------------------------------|-------------------|
| SPR | Willy Sprengfeil Mützenfabrik | Hamburg 19 | date stamp |
| STR | <i>Herbert Straube</i> MÜTZENFABRIK | <i>Annaberg i. Erzgeb.</i> | M43 |
| TEU | G. Teufel Sohn | Tuttlingen | M/42 |
| THO | Gustav Thomas | Breslau 1, Ketzerberg 24 | date stamp |
| VAL | <i>Alfred Valet Mützenfabrik</i> | <i>Stuttgart - Bad Canstatt</i> | date stamp |
| VOR | Vorwerk & Sohn | Wuppertal-Barmen | F42 |
| WEI | F. Weissbach | Glauchau | E.41 |
| WOL | Wolber & Pfaff or WOLBER & PFAFF | Hausach or HAUSACH | M1943 |

Manufacturer number/ stamp

| | | |
|-------------|------------------------|--|
| 0/0250/0906 | 0/0250/0906 (Halfar) | date stamp |
| 0/0384/0066 | 0/0384/0066 | |
| 0/0496/0340 | 0/0496/0340 | date stamp |
| 0/0520/0017 | 0/0520/0017 | RB-Nr; date stamp |
| 0/0669/0036 | 0/0669/0036 | RB-Nr; date stamp |
| 0/0678/5015 | 0/0678/5015 (Ritter) | RB-Nr and no date stamp <i>or</i> date stamp with month and year |
| 0/0721/0074 | 0/0721/0074 (Obenhack) | Manufacturer name; M1943; RBNr |
| 0/0735/0022 | 0/0735/0022 | M43 |
| 0/0843/0008 | 0/0843/0008 | RB-Nr; M43 |
| 0/0843/0012 | 0/0843/0012 (Mayser) | Manufacturer name; M/43; RB-Nr |
| 0/0850/0387 | 0/0850/0387 (Bayer) | Manufacturer name; M/43 |
| 0/1156/0018 | 0/1156/0018 | RB-Nr; M/43 |
| 0/1316/0014 | 0/1316/0014 | date stamp |
| 1/0250/2487 | 1/0250/2487 | date stamp; boxed workshop number |

CAP MANUFACTURER STAMPS

Till 1943, all factory-made German army tropical peaked caps were stamped on the inside with a manufacturer name, a place of manufacture, their size, and usually, but not always, the year of their manufacture (**Figures 1.4–1.6**). Other occasional details include a letter indicating the issue depot (see note 1; **Figures 1.57, 1.59 & 1.62**) and a number indicating the month of issue. Some manufacturers used several quite different stamps in their caps (**Figures 1.5, 1.49, 1.51, 1.59 & 1.73**); most however used just one or—more probably—several indistinguishable stamps. From as early as 1942 (see p. 122), numbers started to replace manufacturer names (**Figures 1.4 & 1.5**, bottom), sometimes preceded by the letters RB Nr or—less frequently—RF Nr (e.g. **Figures 1.80 & 1.83**). A small number of apparently authentic caps have both a name and number, so we know what manufacturer the number designated



(Bayer was numbered 0/0850/0387 and Mayser-Milz, 0/0843/0012), while further correspondences can be inferred from matching sets of traits of manufacture (e.g. 0/0250/0906 with Carl Halfar, and 0/0678/5015 with Franz Ritter, a manufacturer of *Kriegsmarine* caps). For the most part, however, we do not know the manufacturer or manufacturers designated by cap numbers. The *Database* includes authentic caps stamped with 34 different names and 13 different numbers (**Table 1.1**) and it seems likely from a number of undecipherable names and numbers on different, but otherwise plausible looking caps that there are more than this.

Looking into the cap with the peak down, manufacturer stamps were usually placed at right angles to, and to the left of the cap's central seam, with the top of the stamp to the rear of the cap (**Figures 1.4 & 1.6**, top), though there are both consistent and inconsistent exceptions to this rule (**Figure 1.6**). On many caps, the manufacturer's stamp underlies the seam joining the top of the cap to the sides, indicating that the stamp was applied before the cap was fully assembled (**Figures 1.4**, lower middle & **1.6**, bottom). The same or very similar stamps are configured in similar ways in tropical *Schiffchen* (**Appendix 4**) and in Continental headgear by the same manufacturers.

Figure 1.5

Four different stamps used by Carl Halfar. The Halfar name was superseded in 1943 by the number 0/0250/0906.

Photos: Jonathan del Collo; Dal McGuirk; VirtualGrenadier; WAF

Figure 1.6

Stamps in authentic issue tropical peaked caps. Top: underside of a model 1_OR cap by Schlesische Mützenfabrik. Apart from the name stamp, other recurrent features of this manufacturer visible include the layout of the different parts of the stamp (cf. **Figure 1.4**, top), the riveting of the of the ventilation eyelets over the interior washers, the number and placing of the lines of stitching on the underside of the peak and the cap's heavy, ribbed fabric. The position of the stamp on the left-hand side of the cap, with the top of the writing to its rear is typical of most manufacturer's stamps. Middle top: an unexceptional exception to the rule. Manufacturers Berlag, Lago and Alfred Valet stamped their caps on the left-hand side of the cap parallel, instead of at right angles to the central seam. Bottom: another exception to the rule. One of four late Carl Halfars in the *Database* (a model 4_OR cap which has lost its sweatband) on which the manufacturer's stamp has been placed on the right-hand side of the cap. Very few authentic caps have manufacturer stamps in this position. The position of the stamp partially under the lining indicates that the cap was stamped before it was fully assembled (cf. **Figure 1.4**, lower middle). Photos: Ratisbons; Erik Seminovs; Mark Vale

THE IMPLICATIONS OF CAP HISTORY

Cap history puts cap form into context. An early cap does not share the characteristics of a late cap or *vice versa*. Thus, for example, an issue 1940-dated cap has (or will originally have had) an integral soutache and no sweatband and an issue 1943-dated cap, an integral sweatband and no soutache; whereas a purportedly issue cap dated later than 1942 with an integral soutache,



or a purportedly issue cap dated earlier than 1942 with an integral, as opposed to field/ privately applied sweatband, will be a fake—of one sort or another. The variable impact of time on a cap, of its use and later ownership, is also useful in this respect. In attempting to mimic its impact, the best the faker can hope for is a superficial copy, and provided that the student fully considers the relationship of cause and effect, he or she will soon get beneath this. As we shall see again and again through this essay, this typochronology is unambiguous, and it is a very useful tool when it comes to distinguishing real from fake caps.

But there is much more to cap history than form and appearance. Few people who have experienced war would describe it as “romantic” but there have been times when it, or a party to it, has come to seem so: the Confederate States of America, T.E. Lawrence’s revolt in the desert, the Spanish International Brigades. The *Afrikakorps* is another. Because of the charisma of its commanding officer, its dash in the field and the perceived nature of the theatre in which it was engaged, it has captured the imagination of many. The result is that its material culture, and in particular the *Afrikamütze*, “the quintessential trademark of the *Afrikakorps*” (D. Bunch pers. comm.), has now itself become charismatic, and some caps are more likely to be *Afrikamützen* than others. This property is central to understanding the value placed on these caps by collectors and—conversely—the manner and extent of their faking (Seager Thomas 2018).

Cap date

Most factory-made German army tropical peaked caps were originally dated (e.g. **Figures 1.4–1.6**). Dates were stamped above or below the manufacturer’s name. In some caps, the date is an integral part of the manufacturer stamp (**Figure 4**, middle); in others, as with other parts of the stamp, its variable positioning in relation to the former indicates that it was applied separately (e.g. **Figures 1.5, 1.49 & 1.51**). The dates that concern us here range from 1940 to 1943, all of which occur in caps that saw, or were intended to see service in North Africa or—perhaps—further east. (There is no evidence that 1943-dated caps in fact saw service in North Africa).

Many of the caps in the *Database* have lost their dates. Others never had them. The dates of most of these can be inferred from their model (**Table 1.2**) and—up to a point—their traits of manufacture (**Tables 1.1, 1.2 & 1.4–1.8**). Because they have early insignia and early, green or olive tan ventilation eyelets, and because there are no 1940-dated officers’ caps (**Table 1.2**), it is thought that undated early officers’ (model 1_O) caps by Robert Lubstein, and undated early other ranks’ (model 1_OR) caps by Lubstein (**Figures 1.49 & 1.50**), Emil Schebeler (**Figure 1.52**, top) and Schlesische Mützenfabrik are from 1940. Undated caps falling in the 1941–42 period include an early other ranks’ (model 1_OR) cap by Jakob Sperb, which was picked up in Libya by a New Zealand soldier at the end of 1941 (a proposed 1940 attribution

| Manufacturer | Total nos | 1940 | 1941 | 1942 | 1943 | date not known |
|---|-----------|----------------------|-----------------------|--|----------|----------------------|
| <i>Cap model (no of caps in Database)</i> | | | | | | |
| Berlago | 5 | 1_OR (2) | | | | 1_OR (3) |
| Carl Halfar | 40 | 1_OR (14) | 1_OR (5) | 1_OR (6) 3_OR (7) | 4_OR (7) | 1_OR (1) |
| Lago | 16 | 1_OR (9) | 1_OR (5) | | | 1_OR (2) |
| Robert Lubstein | 47 | 1_O (4) 1_OR (6) | 1_O (20) 1_OR (13) | | | 1_O (2) 1_OR (2) |
| SMF | 45 | 1_OR (1) 1_OR (2) | 1_OR (21) | 1_OR (19) | | 1_OR (2) |
| Gustav Thomas | 11 | 1_OR (2) | 1_OR (7) | | | 1_OR (2) |
| Emil Schebeler | 6 | 1_OR (2) | 1_OR (3) | | | 1_OR (1) |
| Erich Bergman | 4 | | 1_OR (4) | | | |
| Weissbach | 6 | | 1_OR (6) | | | |
| Jacob Sperb | 1 | | 1_OR (1) | | | |
| Gebrüder Alm | 2 | | | 2_OR (2) | | |
| BMF | 8 | | | 2_OR (1) 4_OR (2) | 4_OR (4) | 4_OR (1) |
| Greiling | 10 | | | 2_OR (2) | | 1_OR (2) 4_OR (6) |
| Grote | 1 | | | 4_OR (1) | | |
| Bruno Kern | 9 | | | 4_OR (1) | | 4_O (8) |
| Karl Kubach | 10 | | | 1_OR (1) 2_O (1) 4_O (2) 4_OR (1) | 4_OR (2) | 4_O (1) 4_OR (2) |
| Kurtze & Storckmann | 2 | | | 2_OR (2) | | |
| Lago Mitteldeutschland | 4 | | | 2_OR (2) 2_OR (2) | | |
| MFD | 10 | | | 2_OR (6) 4_OR (3) UNK (1) | | |
| Karl Naubert | 1 | | | 1_OR (1) | | |
| Resolut | 7 | | | 2_OR (1) 4_OR (2) | | 4_OR (4) |
| Georg Teufel | 2 | | | 4_OR (2) | | |
| Alfred Valet | 13 | | | 1_OR (10) 3_OR (2) | 4_OR (1) | |
| Vorwerk & Sohn | 4 | | | 4_OR (4) | | |
| Ernst Kern | 4 | | | | | 5_OR (4) |
| Mützen-Häussler | 1 | | | | 4_OR (1) | |
| Aurel Huber | 2 | | | | 4_OR (2) | |

Table 1.2

Caps in the *Database* by model, manufacturer and date. Grey = originally undated caps

| Manufacturer | Total nos | 1940 | 1941 | 1942 | 1943 | date not known |
|---|-----------|----------------------|-----------------------|---|-----------|--|
| <i>Cap model (no of caps in Database)</i> | | | | | | |
| Mayser-Milz | 10 | | | | 4_OR (10) | |
| Obenhack | 2 | | | | 4_OR (2) | |
| Ottmar Reich | 7 | | | | 4_OR (7) | |
| August Schellenberg | 2 | | | | 4_OR (1) | 4_OR (1) |
| Willy Sprengpfeil | 1 | | | | 4_OR (1) | |
| Herbert Straube | 3 | | | | 4_OR (3) | |
| Wolber & Plaff | 2 | | | | 4_OR (2) | |
| Numbered caps | 46 | | | 4_OR | 4_OR (39) | 4_OR (6) |
| Total(s) | 344 | 1_O (4) 1_OR (39) | 1_O (20) 1_OR (65) | 1_OR (37) 2_O (1) 2_OR (18) 3_OR (9) 4_O (3) 4_OR (16) Unkn (1) | 4_OR (82) | 1_O (2) 1_OR (15) 4_O (9) 4_OR (20) 5_OR (4) |

for this cap is rejected because the manufacturer was located in a military district different to that of all other recognized 1940 manufacturers of tropical uniform items and because it has later, tan eyelets) (**Figure 1.56**, top; Kurtz 2004, 122–3; McGuirk 2014b), and two by Greiling, caps by which also have the tan eyelets; and later other ranks' (model 2_OR) caps by Greiling and Lago Mitteldeutschland, which must belong to 1942 as model 2_OR caps were only manufactured in 1942 (**Table 1.2**). Undated caps probably falling in the 1942–43 period include late officers' (model 4_O) caps by Bruno Kern, late other ranks' (model 4_OR) caps by Greiling, and late other ranks' (model 5_OR) caps by Ernst Kern, which, because of the dates these models first appeared (**Table 1.2**) and because they have manufacturers names, and not numbers, are likely to belong to 1942 or—at the latest—early 1943. A small number of undated numbered caps must also belong to late 1942 or 1943, when numbering commenced, or later.

Often there was a demonstrable lag between the date stamped in a cap, or inferred from its model and traits of manufacture, and its date of issue and service. *Wehrmacht* personnel deployed to North Africa in February 1941 wore caps dated to the previous year. Caps acquired by Australian and New Zealand troops in Egypt and Libya (mostly in 1941 and 1942) tended to be of early—usually 1940—date (D. McGuirk pers. comm.; see below), while, so far, not a single 1943-dated cap is known to have seen service in the North African theatre, even though the campaign continued into May that year. There are also photos of early model caps—some new looking—being worn at late dates (e.g. **Figures 1.3 & 1.14**, top; Thomas 2002, 241). Cap date therefore is useful in exploring issues such as supply logistics but by itself can tell us little about when and where a cap was used.

Cap patina

Acquired over time, what I call cap “patina” is the product of three things: weathering by the sun, the rain, damp, deliberate chemical action and micro-organisms; physical wear and damage, caused by everyday use and misuse, washing, the action on the material comprising the cap of ingrained dirt and re-crystallized salt (sweat), long

Figure 1.7

A faded model 1_OR cap worn by a member of the 15th Panzer Division at Tobruk, the Halfaya Pass and Sollum (WAF 2011a). Note the difference in colour between the cap's faded crown and the shadow where its insignia were formerly attached. Can we identify the manufacturer of this cap from the photos shown here? Only caps by Carl Halfar, Berlag, Lago, Emil Schebeler and Schlesische Mützenfabrik had soutaches cut into the brow of the cap, as the soutache was on this one. The stitching above the peak is typical of 1942 caps by Schlesische. The fabric and fabric colour, the (low) position of the shadow left by the eagle, the low false turn-up at the front emphasised by the relatively large shadow left by the cockade, the form of the stitching on the underside of the peak and the bleaching out of its stamp, point to it being a Lago. Also significant is the fact that it was a Panzer cap, Panzer soutaches being more common in the *Database* on Lago than on Schlesisches. In my view, it is a Lago, but clearer details of the insignia attachment and the way the ventilation eyelets were riveted would confirm its identification one way or the other. *Photos: WAF*



term storage and animal activity; and staining, by blood, micro-organisms again, oil, paint and rust. Likely and possible effects are legion. Obvious amongst these are the fading (**Figures 1.7, 1.8 & 1.9**, top right), wear (abrasion and fraying) (**Figures 1.45**, upper middle & **1.55**) and polishing of the cloth comprising the cap, especially at its extremities (**Figure 1.22**), the washing-out of cap stamps (**Figures 1.7, 1.9**, top left & **1.46**), the chipping and flaking-off of the enamel coating the ventilation eyelets (**Figures 1.31 & 1.37**) and corrosion of the metal comprising these (**Figure 1.9**, upper middle left). Also encountered are permanent crease marks resulting from a cap being folded for a long time (**Figure 1.18**, right & **1.19**) (worn caps seem less prone to this than unworn), the loosening of stitches (**Figures 1.18**, left), the cracking of leatherette used in the sweatbands of later caps (**Figure 1.9**, bottom right) and the nibbling of their fabric by mice and silverfish (**Figure 1.9**, bottom left).



Figure 1.8

Before and after. A model 1_OR cap worn by an ambulance driver in the desert (left & middle). Detail of a stained Schlesische Mützenfabrik with the remnants of a green soutache (right). *Photos: eBay; Jonathan del Collo*

Figure 1.9

Different elements of cap patina. Individual caps might display one or more of these. 1: washed out Berlagos stamp—stamps by Berlagos/ Lago (**Figures 1.7 & 1.42**) and Greiling (**Figures 1.66**) were prone to fading. Stamps by Schlesische Mützenfabrik by contrast were resistant to fading (**Figures 1.4** top & **1.6** top). 2: an Erich Bergmann with an unfaded green shadow beneath a (?)period replaced artillery soutache. The shadow suggests, firstly, that the soutache was period replaced, and, secondly, that the cap is naturally faded, not deliberately bleached. 3: corroded zinc eyelets on a Gustav Thomas. 4: (?)blood stains on a Mayser-Milz. 5: black mould stains on a Carl Halfar. 6: corroded zinc eyelets on a Schlesische Mützenfabrik. 7: late rayon eagle on a Vorwerk & Sohn nibbled by silverfish. Apparently the silverfish is partial to rayon. 4: degraded leatherette in the sweatband of a Gebrüder Alm. Most of these features require time to develop and plausible simulacra of them are difficult for fakers to achieve. *Photos: author; Harry Cliffe; Jonathan del Collo; Edward Cotterell; Lee Greer; Frédéric Ruelle; Erik Seminovs; Mark Twiname*



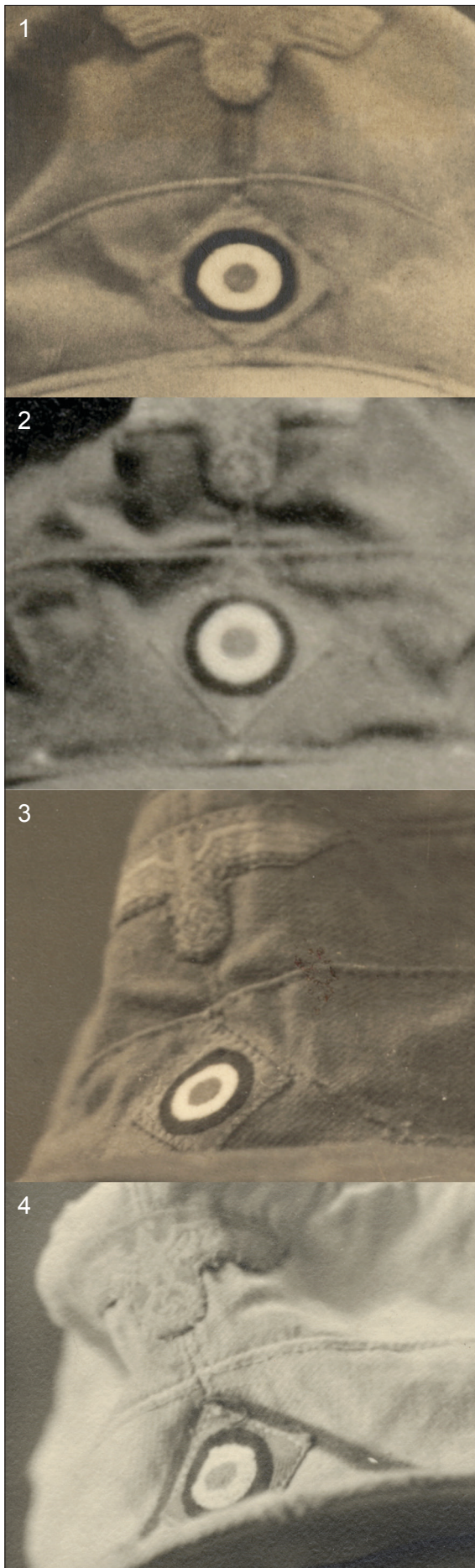
For a lot of collectors, and for most non-standard caps, this patina is central to distinguishing the real from the fake.

Caps in the *Database* range from unissued to heavily worn but *all* have patina. If something is old, it will have aged. Because of their different life histories, however, many caps will have been subjected to quite different processes, and as a result their patinas differ. Different dates and different makes of cap moreover varied in their susceptibility to the processes acting on them. The outer shells of caps by Schlesische Mützenfabrik, for example, are thought to have faded more quickly than those of other makers (McGuirk 1987, 141) (many late caps by this manufacturer were of a buff fabric—fabric type IT—that very often occurs faded); while caps by Alfred Valet have been observed to be weak where the peak was attached to the body, and prone to come apart (WAF 2011b). Up to a point such differences are interpretatively diagnostic. A cap coming apart, for example, may indicate the former presence of a soutache, or a Valet. Heavy fading of the cap body may be—though of course it is not always—indicative of a Schlesische or deliberate bleaching (**Figures 1.13, 1.30 & 1.42**, bottom right); heavy fading of the manufacturer stamp, of a Lago or a Greiling (**Figures 1.46 & 1.66**).² An unfaded shadow where a soutache was formerly attached (e.g. **Figures 1.7 & 1.32**, upper middle), shows, on the one hand, that the cap had seen considerable service before the soutache was removed, and, on the other, that it did not see much service afterwards, and it suggests that the cap faded in the sun, not as a result of washing or chemical bleaching. An unfaded shadow under a piece of secondary insignia *may* indicate that this was period applied (**Figure 1.9**, top right). A complete absence of patina will probably be indicative of a fake, or—at best—an unissued cap.

Modification

Tropical peaked caps were deliberately modified in a variety of official, semi-official, and unofficial ways. The former include the removal of the soutache by order after July 1942 (Bender & Law 1973, 193) (**Figure 1.10**), the replacement of soutaches of one colour with soutaches of another colour (**Figures 1.40 & 1.55**, top), the addition of officers' piping to other ranks caps (**Figure 1.11**, left), the addition of the metal *Gebirgsjäger* edelweiss (**Figure 1.11**, top right) and the replacement of army by *Luftwaffe* insignia (**Figure 1.11**, middle & bottom right). Of these, the first is common, the others less so. Semi-official, albeit in a rather different way, was the removal of insignia after Germany's surrender in 1945 (**Figure 1.7**). Unofficial ways in which caps were modified include the replacement of the original tropical insignia on issue officers' caps by fancier, Continental insignia (**Figure 1.12**, top & middle), the addition

² 50% of the caps in the *Database* identified as Lagos are without stamps and much more than 50% of the Greilings. These are much higher proportions than for, for example, Carl Halfars and Lubsteins. Caps without stamps by all four of these manufacturers are readily identifiable.



of unofficial insignia (**Figures 1.12 & 1.59**), deliberate bleaching (**Figures 1.13 & 1.42**, bottom right), the addition of, or trimming of a sweatband, the taking in or letting out of the back of the cap, and, very occasionally, the removal of its peak (**Figure A4.6**, left).

Indicators of soutache removal include residual and loose stitches where the soutache was formerly attached, slots in the brow of the cap where, in some caps, the soutache was cut into it, relics of the soutache itself, and—occasionally—an inverted V-shaped shadow where, as we have seen, the soutache protected the body of the cap from the sun (**Figures 1.7, 1.8**, right, **1.10 & 1.32**, upper middle). The addition of officers' piping is indicated by its presence on caps by manufacturers that did not make officers' caps (**Figure 1.11**, left), piping around the crown of the cap only (**Figure 1.11**, middle left), and piping of a non-standard type or thickness for army

Figure 1.10

Soutache removed model 1_OR caps. On (1), two small cuts are visible in the brow, just above the peak, where the soutache formerly entered it; on (2), two tufts of soutache are visible in the same place, and there are faint stitch lines between these and the top of the cockade; on (3), the stitching that formerly attached the soutache remains clearly visible; and on (4), there is an unfaded shadow where the soutache protected the body of the cap from the sun (cf. **Figure 1.9**, top right). Cap (3) is a Carl Halfar, the only manufacturer of soutached caps to have used the form of zigzag-lock stitch shown to apply its insignia. *Photos: author's coll.*



Figure 1.11

Official and semi-official modifications. Left: officer upgrades. Top & bottom: model 1_OR caps with added officers' piping around the brow of the cap and the front of the false turn-up. Only Lubstein made the model 1_O cap (e.g. **Figure 1.15**, right). On Lubsteins the soutache is folded between the cap's brow and the cap's peak. On the caps shown here, the soutaches are cut into the cap's brow. They cannot therefore be Lubsteins and must therefore be modifications. Middle: model 4_OR cap with added officers' piping around the brow of the cap only, a feature not seen on factory-made officers' caps. Right: added and replaced insignia. Top: a *Gebirgsjäger* edelweiss applied to the left-hand side of an officer's cap. Middle: a heavily weathered model 1_OR cap by Berlag, on which the original army eagle has been replaced by a *Luftwaffe* breast eagle and the army soutache removed. Bottom: another model 1_OR cap to which a *Luftwaffe* eagle has been applied and from which the army soutache has been removed. Both these *Luftwaffe* modified caps retain their original army cockades. *Photos: author's coll.; Mike Donne; Harry Cliffe*

**Figure 1.12**

Unofficial modifications. Top: model 1_OR cap with added officers' piping and a replacement eagle. Middle: factory-made model 1_O cap with a replacement cockade. Bottom: soldier with a *Tropenhelm* shield unofficially applied to the side of his cap. *Photos: the Private AFRIKAKORPS Photograph Collection of Generalleutnant Fritz Bayerlein (Bay-013), courtesy Fritz Dittmar-Bayerlein & Pat Spayd; Schicksal Nordafrika; WAF*

caps (**Figures 1.45 & 1.56**; cf. **Figure 1.49**). Because the added piping was not integral to the cap, the stitching attaching it also often came undone. Period replaced or added insignia should have a patina consistent with the rest of the cap (e.g. **Figure 1.11**, middle right). A period-applied *Gebirgsjäger edelweiss*, for example, will very likely show signs of corrosion, and, if the cap to which it is applied is faded, have an unfaded shadow beneath it.

The most difficult of these modifications to distinguish in caps in the *Database* is deliberate bleaching. It was done chemically, the cap being dipped in water into which anti-gas tablets had been dissolved (Bender &



Figure 1.13

Bleached caps. Main picture: restored Schlesische Mützenfabrik in fabric type G (not the readily fadeable fabric type IT). The whole of the twill shell of the cap, including its interior surfaces (see **Figure 1.30**), has been bleached white, suggesting the possibility that it was artificially bleached, rather than bleached by the sun. Inset: pink stain in another cap caused when the dye of the caps's red lining ran during bleaching. *Photos: Jonathan del Collo; WAF*

Law 1973, 195; McGuirk 1987, 140), a process which would have effected the whole of the cap (**Figures 1.13 & 1.30**), not just the parts of it that were exposed to the sun—but so would washing, and methods of deliberate bleaching have been mooted that would not have affected the whole of the cap (WAF 2019). Another indicator is a pink stain around the seams of the cap where the red lining was joined to it (D. McGuirk pers. comm.) (**Figures 1.13**, inset). Deliberate bleaching is usually attributed to a desire by newcomers to the theatre to blend in with longer-serving compatriots (McGuirk 1987, 140), so will perhaps be seen most frequently in caps of relatively late date.

Provenance

If your friend's grandfather served in North Africa during WW2 and told your friend that he picked up a cap he gave him at El Alamein, there is a good chance that it is the truth. True, your friend's grandfather may have misremembered exactly where he picked it up, or he may have embellished the story, but it's unlikely to be a complete lie. A verifiable veteran provenance of this sort is the best guarantee that any military antique is authentic and ultimately almost everything we can say with confidence about the German army tropical peaked cap descends from caps with such a provenance. Though mostly unpublished, many of the caps in the *Database* do have such a provenance (**Table 1.3**). But the sources of such material are fading fast; and as it passes from veteran to veteran's family, veteran's family to dealer and dealer to collector, so too does the authenticating anecdotal record that it carries with it.

| Maker | Model | Date of cap | Date cap picked up/ worn | Location | Souvenired by |
|-----------|-------|-------------|---------------------------|-----------------|---------------|
| Lubstein | 1_O | ND (1940) | December 41 | Libya | Australian |
| Lubstein | 1_O | ND (1940) | December 41 | North Africa | n/a |
| Lubstein | 1_OR | ND (1940) | December 41 | Libya | New Zealander |
| Lubstein | 1_OR | ND (1940) | 1941–43 | North Africa | Briton |
| Schebeler | 1_OR | ND (1940) | <i>late</i> 1941? | Libya? | n/a |
| Schebeler | 1_OR | ND (1940) | Nov./ December 41 | Libya | New Zealander |
| Berlago | 1_OR | 1940 | December 41 | Libya | South African |
| Berlago | 1_OR | 1940 | 1942 | Egypt? | Australian |
| Halfar | 1_OR | 1940 | <i>before</i> December 42 | Libya | Australian |
| Halfar | 1_OR | 1940 | <i>before</i> December 42 | North Africa | Australian |
| Lago | 1_OR | 1940 | 1941 | Egypt, Libya | German |
| Lago | 1_OR | 1940 | 1941–43 | North Africa | German |
| Sperb | 1_OR | ND (1941) | Dec 41 | Libya | New Zealander |
| Lago | 1_OR | 1941 | <i>before</i> December 42 | North Africa | Australian |
| Lubstein | 1_OR | 1941 | <i>before</i> December 42 | North Africa | Australian |
| Lubstein | 1_OR | 1941 | October 42 | Egypt | Briton |
| Thomas | 1_OR | 1941 | July 42 | Egypt | New Zealander |
| Thomas | 1_OR | 1941 | October 42 | Egypt | Australian |
| Thomas | 1_OR | 1941 | <i>after</i> August 43 | Italy | New Zealander |
| SMF | 1_OR | 1942 | <i>before</i> December 42 | North Africa | Australian |
| SMF | 1_OR | 1942 | Oct./ November 42 | Egypt | Australian |
| SMF | 1_OR | 1942 | 1944–45 | Northern Europe | USA |
| Valet | 1_OR | 1942 | Dec. 42–March 43 | Tunisia | German |

Table 1.3

Caps in the *Database* with a known surviving veteran provenance

| Maker | Model | Date of cap | Date cap picked up/ worn | Location | Souvenired by |
|---------------------|-------|-------------|-----------------------------|---------------------|---------------|
| Valet | 1_OR | 1942 | 1943 | Tunisia | USA |
| Halfar | 1_OR | n/a | 1943 | Tunisia | Briton |
| Greiling | 2_OR | ND (1942) | April 43 | Tunisia | New Zealander |
| Alm | 2_OR | 1942 | <i>after</i> March 43 | Tunisia | USA |
| Kurtze & Storckmann | 2_OR | 1942 | November 42 | Egypt | New Zealander |
| MFD | 2_OR | 1942 | late war | Italy | n/a |
| Halfar | 3_OR | 1942 | 1945 | Germany | USA |
| Greiling | 4_OR | ND (1942) | 1943 | Tunisia | New Zealander |
| Greiling | 4_OR | ND (1942) | 1943–45 | Italy | USA |
| BMF | 4_OR | 1942 | May 43 | Tunisia | NZ |
| Kubach | 4_O | 1942 | 1942–43 | North Africa | German |
| Vorwerk | 4_OR | 1942 | November 42–May 43 | Tunisia | USA |
| Ottmar Reich | 4_OR | 1943 | 1943–45 | Italy | n/a |
| 0/0250/0906 | 4_OR | 1943 | 1943–48 | Egypt (POW camp) | Canadian |
| 0/0843/0008 | 4_OR | 1943 | 1943–45 | Italy | USA |

Many other useful inferences can be drawn from souvenirs brought home by servicemen.

I referred above to the lag between manufacture and date of issue and service. *Afrikakorps* historian Dal McGuirk estimates that of the 100-odd caps acquired in the Western Desert by Australian and New Zealand soldiers between 1941 and 1942 *seen by him*, more than 40% were dated 1940, with the remaining caps divided equally between 1941 and 1942 (D. McGuirk pers. comm.), figures which contrast markedly with those for caps of these dates in the *Database*, which presumably include caps that were either not issued or issued at a later date, of which only 20% are dated to 1940, and 40% to 1941 and 40% to 1942 (**Table 1.2**). We do not have analogous data for the Tunisian or Italian campaigns but amongst the caps acquired, or known to have seen service in these theatres, are several 1942-dated examples by manufacturers not represented amongst the caps from the Western Desert—from Tunisia, Alm, Bayerische Mützen-Fabrik, Greiling, Valet and Vorwerk & Sohn, and from Italy, Greiling, Mützen-Fabrik Dreßen, Ottmar Reich and 0/0843/0008—but *no* 1940-dated and only very few 1941-dated caps (**Table 1.3**). When compared to the likely total number of caps made, the number of caps with a known veteran provenance is of course tiny, and—significantly—they include none known to have seen service elsewhere in the Mediterranean, or in the southern Soviet Union, and for interpretative purposes they must be treated with caution, but they nonetheless provide a useful starting point for our understanding of when and where caps were used.

Data from provenanced veteran souvenirs also confirms photographic evidence that the July 1942 order to remove the soutache was not immediately carried out—and in some cases, not for many months. For example, two caps in the *Database* acquired at El Alamein, retain their soutaches, as does one said to have been brought back from Italy “late” in the war (Kurtz 2004, 139). (The published provenance of another soutached cap said to have been acquired in Italy is disputed) (**Figure A2.1**). On the other hand, they have been removed from all caps in it, which would have had soutaches, *known* to have seen service in Tunisia. Again, however, we are dealing with very small numbers of caps, and we must be careful not to read too much into this.

Finally, a veteran provenance brings the cap alive. It proves that the cap belongs to a particular place and time, a particular episode in history, and in so doing gives it meaning, and—in some cases—the status of a charismatic object. Take a lime green soutached cap picked up by an Australian soldier at Tobruk in May or June 1941 (Borg & Twiname 2010, 21–22). It has been inferred, probably correctly, that it belonged to a member of one of the 15th Panzer Division’s infantry regiments, an association that brings with it a particular history of dramatic action and romantic places, outside the experience of the majority of collectors and students. Who would imagine that a piece of standardized uniform clothing could be so potent? When it was picked up, whether it could or could not have seen service in the desert, its condition (preferably “salty”; never mint), *any* story accompanying it: these things will add to or qualify a cap’s charisma.

CAP FORM

The slightly odd, high-fronted form of the German army tropical peaked cap was the product of three things: the need for protection against the Mediterranean sun, the need for a platform on which to mount the insignia of the then National Socialist German army, and a pre-existing tradition of military headgear. Weathered, it became the badge of the *Afrikakorps* and instantly recognizable as such, and our view of it today is so coloured by this that it is now difficult for us to see it for the inelegant hybrid that it is. We also lose sight of the fact that it was not one cap, but several (**Figures 1.14–1.19**), each a further reflection of—and in some cases a reaction against—its hybrid elements.

The classic *Afrikamütze* is what I have styled the model 1_O, for officers (**Figure 1.15**, right), and the model 1_OR, for other ranks (**Figure 1.15**, left). Because this model is most reliably associated with the *Afrikakorps*, it is the most charismatic, the most sought after and the most valuable (in monetary terms). But lessons learned from its use in the desert spawned another model (the 2_O/ 2_OR) (**Figures 1.16 & 1.62**), and changes in insignia, three more again (the 3_OR, the 4_O/ 4_OR and the 5_OR) (**Figures 1.17–1.18**), while the experience of war resulted in, if not another model, a change in its cut

**Figure 1.14**

Similar but different. Top: soutache-removed model 1_O cap by Robert Lubstein, probably dating from 1941. The photo is annotated: "Before departing for Sardinia on 26 June 43". Model 1_O and model 1_OR caps had soutaches but not sweatbands. Middle: model 2_OR cap worn in Tunisia. Model 2_O and 2_OR caps had soutaches and sweatbands. This cap's sweatband is visible between the peak of the cap and the soldier's ear. Caps with soutaches and sweatbands were manufactured only in 1942. Bottom: undated portrait showing a model 4_OR cap. Model 4_O and 4_OR caps had sweatbands but no soutaches. On this cap, the presence of a sweatband is indicated by the two intermediately-spaced rows of stitching above the peak and below the cockade. Few 4_OR caps in the *Database* combine hand-sewn insignia and intermediately-spaced rows of stitching above the peak, the upper line of which is below the cockade, as on this cap. I believe it a Bayerische Mützen-Fabrik. *Photos: author's coll.; eBay*

and the materials used in it and therefore in its overall appearance. Finally, even for individual models, there was—as far as we know—no uniform template, so that the shape and proportions of caps by different manufacturers varied. Nor indeed were rules adhered to about how it was sported by individual soldiers, though its form lent itself to, and a preference was shown by many for, a rakish angle and pinched brow (e.g. **Figures 1.11**, top left & **1.14**, middle).

In combination with the different names, dates, and varying details of fabric and construction, this range of cap forms lies at the heart of the present analysis, and for this reason, I have for it discarded a pre-existing

division of the tropical peaked cap into 1st and 2nd pattern caps (without and with sweatbands, respectively) used by many, and adopted instead the present classification, which more fully reflects the cap's evolution over time. Caps from which the soutache has been removed (e.g. **Figure 1.7** & **1.14**, top) are grouped with their non-soutache removed counterparts.

Model

The form of the German army tropical peaked cap changed over time. There are five or—possibly—six models, for three of which there are both other-ranks' (OR) and officers' versions (O). Their ordering here corresponds with their appearance and longevity in the record (**Table 1.2**). Model 1_O/ 1_OR caps have or had a factory-applied soutache or inverted chevron on the front, the colour of which indicated the wearer's branch of service, and no sweatband. 1_Os were piped around the top of the cap and around the scallop in the false turn-up with silver officers' braid. Model 1_Os date from 1940 to 1941, model 1_ORs from 1940 to 1942. Most of the caps illustrated in this essay so far have been of these types (**Figures 1.14**, top & **1.15**; see also **Figures 1.20** top, **1.22**, **1.42–57**, **1.61**, **1.64–1.65** etc.). The model 2_O/ 2_OR has or had a soutache and a sweatband (**Figures 1.14**, middle & **1.16**, **1.33**, **1.58–1.60** & **1.62–1.63**). Like model 1_O caps, model 2_Os, which are rare, are piped with silver officers' braid. All the dated examples of model 2_O/ OR caps in the *Database* belong to 1942, the earliest—a Lago Mitteldeutschland—to February of that year. In July 1942 soutaches were ordered removed and many surviving caps of these models have had this done; but these caps are still essentially model 1_O/ 1_OR or 2_O/ 2_OR caps (e.g. **Figures 1.10**, **1.14**, top, **1.58** & **1.62**). A very small number of other ranks caps without sweatbands appear never to have had soutaches (model 3_OR caps), and presumably post date the order to remove it. Those with surviving dates belong to 1942. All of the model 3_OR caps in the *Database* are by Carl Halfar or Alfred Valet, and it may be that the model was peculiar to these manufacturers (**Figure 1.17**). The model 4_OR/ 4_O incorporates the sweatband, but not the soutache (**Figures 1.14**, bottom & **1.18**; see also **1.20**, bottom, **1.66–1.83** etc.), and also presumably postdates the order to remove this. 4_Os are also piped with silver officers' braid. Model 4_ORs continued to be made into 1943 and beyond. One of the two manufacturers of model 4_O caps—Bruno Kern—did not date them (**Figure 1.18**, right); the other—Karl Kubach—appears to have stopped making them in 1942, though it continued to make the model 4_OR. Possibly therefore silver-piped officers' caps went out of production in 1942. This view is consistent with the photographic record, which shows relatively few silver-piped officers caps in use after this period. Models 5_OR and 6_OR also have sweatbands and no soutache. Model 5_ORs lack the false turn-up seen on other German army tropical peaked caps (**Figures 1.19** & **1.72**). These are undated but because they do not have soutaches

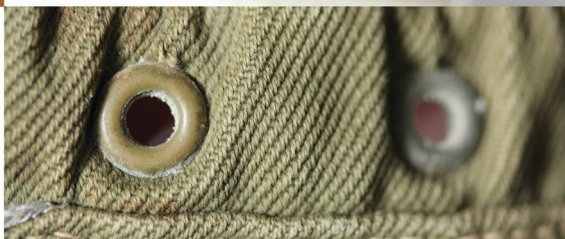


Figure 1.15

Model 1_OR (left) and model 1_O caps (right). These models were manufactured with a soutache and without a sweatband. The 1_OR cap, which is dated 1940, is by Carl Halfar. It is in heavy cotton twill (my fabric type G), has an early eagle and cockade and early green ventilation eyelets. The zigzag machine lock stitch used to apply the insignia, the cap's shape and stitching, the soutache attachment and position of its eyelets, widely-spaced and set back from the cap's false turn-up, are all characteristic—though, individually, not exclusively diagnostic—of this manufacturer. The 1_O cap, which is undated, is by the only manufacturer of this model of cap, Robert Lubstein. It too carries early insignia and has early, olive tan ventilation eyelets. Unusually, for a cap of its model, it has steel interior washers. Once again its traits of manufacturer (except for the steel washers) are characteristic—though, individually, not exclusively diagnostic—of this manufacturer.

Photos: Dal McGuirk; Barry Searson

**Figure 1.16**

Model 2_OR cap by Kurtze & Storckmann. Model 2_OR caps had a sweatband and a soutache. This cap has no visible date but belongs to 1942. It is fashioned from a light ribbed twill (my fabric RT.2), has tan ventilation eyelets, an early (type EA.1) eagle and an intermediate (type CC) cockade. The sweatband is of buff leatherette and undyed cotton plain weave. Note the two widely-spaced lines of stitching above the peak. Uniquely on caps by Kurtze & Storckmann, the cockade overlies the latter, indicating that it was applied after the cap was assembled.

Photos: William Kramer

**Figure 1.17**

Model 3_OR cap by Carl Halfar. Model 3_OR caps had neither soutache nor sweatband. Like four other, out of six model 3_OR caps by Carl Halfar in the *Database*, this one has an early type CA cockade. Unusually, it has only one ventilation eyelet on each side of the cap. It is said to have been taken out of a bomber in Germany by a US serviceman in 1945. *Photos: George Cone*

Figure 1.18

Later model 4_OR (left) and 4_O caps (right). These cap models were manufactured with an integral sweatband but no soutache. Both caps are fashioned from a light, ribbed twill (my fabric RT.3). The model 4_OR cap is dated 1943 and has a number, 0/0496/0340, instead of a manufacturer name. It has green ventilation eyelets (a feature which re-emerged on late-dated caps), a hand-sewn, intermediate (type EB.1) eagle and a machine straight-lock stitched, late (type CD.2) cockade. There is a single line of stitching above the peak and a single line of stitching around the underside of this. The sweatband is of tan leatherette and green plain weave. The model 4_O cap is by Bruno Kern (one of only two manufacturers known to have made model 4_O caps). Typically for officers' caps by this manufacturer it is undated. It has tan ventilation eyelets, with inside-out interior washers (cf. **Figure 1.37**), and hand-sewn eagle and early (type CA) cockade. There is a closely-spaced double line of stitching immediately above the peak and a double line of stitching on the underside of, and close to the edge of, this. The sweatband is of black leatherette and green twill. These two sets of traits are typical of these two manufacturers. *Photos: eMedals; Hermann Historica Auctioneers; Lux Military Antiques; Virtual Grenadier*



and have names instead of numbers, they probably date to the end 1942 or the beginning of 1943. One is thought to have been acquired by a US serviceman from a POW in Tunisia in 1943, but it is unknown whether this soldier was captured in Tunisia or elsewhere (Borg & Twiname 2010, 24). On model 6_OR caps, the false turn-up was formed by pinching and sewing the side panels, as on some *Kriegsmarine* caps, instead of sewing different pieces of cloth together. It is represented in the *Database* by a single 1943-dated cap of uncertain authenticity (**Appendix 3**). I know of no officers' versions of either of these two models of cap.



Figure 1.19

Model 5_OR cap. The model 5_OR cap lacks the false turn-up seen on other German army tropical peaked caps but otherwise closely resembles the model 4_OR cap (cf. **Figure 1.18**, left). The sweatband is of buff leatherette and buff plain weave. Only one manufacturer of them is known, Ernst Kern, and none are dated. There is no evidence that they reached Africa except on the heads of POWs, though the possibility cannot be ruled out. This cap has an intermediate pattern eagle and a late cockade. *Photos:*

Lux Military Antiques; WAF

Cap shape

Shape is an obvious possible variable, the shape of the body of the cap and the shape of its peak. While all models referred to above are approximately similar in form, there were and are distinguishable, though not always consistent, differences in these from manufacturer to manufacturer and over time. Daniel Fisher remarks the “stubby peak and high crown” characteristic of caps by Robert Lubstein (but see p. 75, below) (Fisher 2011, 24), and the relatively low crowns of later caps (*ibid.*, 48; Fisher & Lock 2012, 108),

and Dal McGuirk the “high top point of the front panel holding the eagle and swastika” of Schlesische Mützenfabrik-made caps (McGuirk 2014a).

Up to a point these differences can be quantified. For the body of the cap, the heights of the front, sides and back of different caps can be measured and their relative proportions compared; and for the peak, the lengths of the peak and body, or the length of the peak and height of the body. We can measure the heights of the cap above and below the false turn-up of different caps and compare *their* relative proportions. We can compare their shapes against pre-prepared templates, showing high and low fronts, and long and short, and pointed and rounded peaks. An easy first step is to measure the space between the eagle and the cockade and the adjacent seams. These reveal significant differences in caps of all periods. Fisher’s remarks about late caps, for example, apply to those by some manufacturers only. Unfortunately, however, in photos such as those from which the *Database* is drawn, the views necessary to make such comparisons are often unavailable. Many photos also distort the shape of the cap. For cap shape, therefore, the *Database* is currently blank. I can, however, confirm some pre-existing assertions about cap shape (**Figures 1.20 & 1.21**), which in combination with the other variables discussed here can assist us in distinguishing caps by different manufacturers and of different dates.



Figure 1.20

High and low caps. Top: a model 1_OR cap by Schlesische Mützenfabrik. Bottom: a model 4_OR cap, probably a 0/0678/5015. Both the height of the cap front and the position of the cockade in relation to the seam below, help us to distinguish these from other, similar caps. *Photos: author’s coll.*

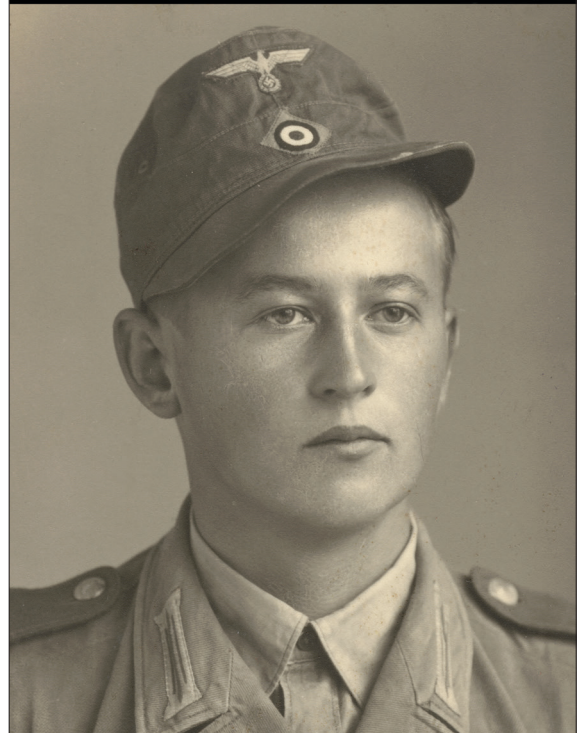




Figure 1.21

A 1941-dated Gustav Thomas (left) and a 1941-dated Robert Lubstein (right), both size 55. The peak of the Thomas is longer than that of the Lubstein. Note also the different heights of the sides of their false turn-ups. *Photos: Auckland War Memorial; VirtualGrenadier*

INSIGNIA TYPE

Factory applied insignia consisted of the army tropical eagle and cockade and, till 1942, a coloured soutache designating the wearer's branch of service (**Figure 1.22**). According to the collecting community, there are three sequential variants of the eagle, and three of the cockade. These parallel similar variants of the army tropical tunic eagle and are said to reflect the changing proportions in them of cotton to rayon (a synthetic fibre made from wood cellulose): first wholly cotton, then a cotton/rayon mix, and finally pure rayon. Likewise, some collectors distinguish early dull cotton from later, more lustrous rayon covered soutache braid. There is no doubt that the ordering of the eagle and cockade is approximately correct, for there is a clear relationship between their morphology and their occurrence in the record. However, it is an oversimplification. At present count there are at least 16 distinguishable eagle variants, which can be divided into four, not three, chronological groups on the basis of their first appearance in the record (**Table 1.4; Figures 1.23–1.25**). (Four different eagles can be distinguished on 1940-dated caps alone: **Figure 1.23**). The relationships of eagle variants, moreover, are far from clear-cut. I suspect, for example, that Jacquard pattern-cards originally used to weave early and intermediate eagles in cotton were later used to weave them in rayon (e.g. EB.1 and EC.7: **Figures 1.23 & 1.24**); while there are some very subtle differences across otherwise identical eagles (e.g. EC.1 and EC.8: **Figure 1.24**), which must result from the use of different cards, and suggest the possibility of a whole range of as yet undistinguished sub-variants. Up to a point the same is true of the tropical cockade, though the number of distinguishable variants is fewer (**Table 1.5; Figure 1.26**). The description below, therefore, and the inferences I have drawn from the associations

of different insignia variants in the *Database*, should be considered both incomplete and provisional. Nonetheless there *is* a correspondence between insignia variant and cap date as well as some interpretable exceptions to the rule. Apparently late insignia variants occur, for example, on early caps by some manufacturers only, while early variants, while not uncommon on later caps, also occur more frequently on caps by some manufacturers than on caps by others, and thus are potentially diagnostic of date and manufacturer and provide useful evidence of the nature of cap manufacturer resource procurement.

Figure 1.22

Tropical cap insignia on a 1940-dated model 1_OR by Carl Halfar (**Figure 1.15**, left). The eagle is 57 mm wide and 26 mm high, the cockade background is 34 mm across (24.5 mm wide) and the roundel has a diameter of 21 mm. The soutache is 3–4 mm wide. (When measuring insignia, it should of course be born in mind that both cotton and rayon shrink). The eagle and the cockade on this cap are both early types (cf. **Figures 1.23** & **1.26**, top). Note also the characteristic zigzag-lock stitch used to apply the insignia. Scale in inches and cms. *Photo: Barry Searson*



Eagle

The tropical eagle consists of a light, blue-grey bird standing on a wreathed swastika against a reddish-yellow background, both bird and background in “Bevo” or Jacquard weave. The backing cloth is usually tan coloured, though greenish variants are reported. Early types are characterized by their woolly weave, which emphasizes the features comprising the design, such as the individual feathers, which look rounded, and the stitches comprising the background (**Figure 1.23**). Later eagles tend to be woven from thinner, silkier threads, often—but not always—in flatter relief (**Figures 1.24–1.25**). The

| Date | Manufacturer | Model | Qty of caps | A.1 | A.2 | A.3 | A.4 | B.1 | B.2 | C.1 | C.2 | C.3 | C.4 | C.5 | C.6 | C.7 | C.8 | C.9 | D.1 | D.2 |
|-------------------|--------------------|----------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1940 | Berlago | 1_OR | 2 | 1 | | | 1 | | | | | | | | | | | | | |
| | Halfar | 1_OR | 13 | 11 | | 2 | | | | | | | | | | | | | | |
| | Lago | 1_OR | 5 | 2 | | 3 | | | | | | | | | | | | | | |
| | Lubstein | 1_O,1_OR | 9 | 7 | 1 | 1 | | | | | | | | | | | | | | |
| | SMF | 1_OR | 3 | 3 | | | | | | | | | | | | | | | | |
| | Schebeler | 1_OR | 2 | 1 | | 1 | | | | | | | | | | | | | | |
| Total 1940 (%) | | | 72 | 3 | 22 | 3 | | | | | | | | | | | | | | |
| 1940 or 1941 | Lago | 1_OR | 1 | | | | | 1 | | | | | | | | | | | | |
| | Lubstein | 1_OR | 3 | 3 | | | | | | | | | | | | | | | | |
| | Schebeler | 1_OR | 1 | 1 | | | | | | | | | | | | | | | | |
| | Thomas | 1_OR | 2 | | | | | 1 | | | | | 1 | | | | | | | |
| Total 1940/41 (%) | | | 57 | | | | | 29 | | | | | 14 | | | | | | | |
| 1941 | Bergmann | 1_OR | 3 | 3 | | | | | | | | | | | | | | | | |
| | Halfar | 1_OR | 4 | 2 | | | | | | | | | | | | | | | | |
| | Lago | 1_OR | 4 | 2 | | | | | | | | | | | | | | | | |
| | Lubstein | 1_O,1_OR | 23 | 20 | | 1 | | | | | | | | | | | | | | |
| | Schebeler | 1_OR | 3 | 3 | | | | | | | | | | | | | | | | |
| | SMF | 1_OR | 11 | 6 | 1 | | | 4 | | | | | | | | | | | | |
| | Sperb | 1_OR | 1 | 1 | | | | | | | | | | | | | | | | |
| | Thomas | 1_OR | 4 | 2 | 1 | | | 1 | | | | | | | | | | | | |
| | Weissbach | 1_OR | 4 | | | 5 | | | 4 | | | | | | | | | | | |
| Total 1941 (%) | | | 69 | | | 5 | | 19 | 7 | | | | | | | | | | | |
| 1941 or 1942 | Greiling | 1_OR | 1 | | | | 1 | | | | | | | | | | | | | |
| | SMF | 1_OR | 1 | | 1 | | | | | | | | | | | | | | | |
| Total 1941/2 (%) | | | | | 50 | | 50 | | | | | | | | | | | | | |
| 1942 | Halfar | 1_OR | 5 | 2 | | | | 1 | | | | | | | | | | 1 | | |
| | SMF | 1_OR | 10 | 4 | | 1 | | 5 | | | | | | | | | | | | |
| | Valet | 1_OR | 6 | 1 | | | | | | | | | 1 | | | | | | | |
| | Alm | 2_OR | 2 | | | | | 2 | | | | | | | | | | | | |
| | BMF | 2_OR | 1 | 1 | | | | | 1 | | | | | | | | | | | |
| | Kubach | 2_O | 1 | 1 | | | | | | | | | | | | | | | | |
| | Kurtze & Storkmann | 2_OR | 2 | 2 | | | | | | | | | | | | | | | | |
| | LMD | 2_OR | 4 | | | | | | | | | | | | | | | | | |
| | MFD | 2_OR | 4 | | | | | 2 | | | | | | | | | | | | |
| | Resolut | 2_OR | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | 1 |

Table 1.4

Eagles distinguishable to type in the *Database*. Different eagle patterns appeared

| Date | Manufacturer | Model | Qty of caps | A.1 | A.2 | A.3 | A.4 | B.1 | B.2 | C.1 | C.2 | C.3 | C.4 | C.5 | C.6 | C.7 | C.8 | C.9 | D.1 | D.2 |
|-------------------|----------------------|----------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1942 cont. | Halfar | 3_OR | 4 | 1 | | | | 1 | | 1 | | | | | 1 | | | | | |
| | Valet | 3_OR | 2 | 1 | | | | | | | | 1 | | | | | | | | |
| | Bruno Kern | 4_OR | 1 | | | | | | | | | | | | | | 1 | | | |
| | Kubach | 1_O_4_OR | 2 | | | | | | | | | 1 | | | 1 | | | | | |
| | MFD | 4_OR | 1 | | | | | 1 | | | | | | | | | | | | |
| | Resolut | 4_OR | 2 | | | | | | | 1 | 1 | | | | | | | | | |
| | Teufel | 4_OR | 1 | | | | | 1 | | | | | | | | | | | | |
| Vorwerk & Sohn | | | 4 | | | | | | | 1 | | 2 | 1 | | | | | | | |
| Total 1942 (%) | | | | 24 | 2 | 2 | | 24 | 2 | 15 | 7 | 4 | 4 | 2 | 6 | 6 | 2 | 2 | | |
| 1942 or 1943 | Bruno Kern | 4_O | 6 | | | | | | | | | | | | | | 6 | | | |
| | Greiling | 4_OR | 5 | | | | 1 | | | 3 | | | | | | 1 | | | | |
| | Kubach | 4_O | 1 | | | | | | | | | | | | 1 | | | | | |
| | Resolut | 4_OR | 2 | 1 | | | | | | | | | | | | 1 | | | | |
| | Ernst Kern | 5_OR | 4 | | | | | | | | | | | | | 4 | | | | |
| Total 1942/3 (%) | | | | 5 | | | 5 | | | 17 | | | | | 5 | 35 | 33 | | | |
| 1943 | BMF 0/0850/0387 | 4_OR | 4 | | | | | | | 2 | | | | | | | | | 1 | 1 |
| | Halfar 0/0250/0906 | 4_OR | 3 | | | | | | | 1 | | | | | | | | 2 | | |
| | Häussler | 4_OR | 1 | | | | | 1 | | | | | | | | | | | | |
| | Huber | 4_OR | 1 | | | | | | | | | | | | | | | | | 1 |
| | Mayser 0/0843/0012 | 4_OR | 9 | | | | | | 2 | 2 | 1 | | | | | | | | | 3 |
| | Obenhack 0/0721/0074 | 4_OR | 1 | 1 | | | | | | 1 | | | | | | | | | | |
| | Ottmar Reich | 4_OR | 5 | | | | | | | 1 | 1 | 1 | | | | 1 | | | | 1 |
| | Schellenberg | 4_OR | 2 | | | | | | | | | 1 | | | | 1 | | | | |
| | Straub | 4_OR | 3 | | | | | | | | | | 2 | | | | 1 | | | |
| | Valet | 4_OR | 1 | | | | | | | 1 | | | | | | | | | | |
| | Wolber & Plaff | 4_OR | 1 | | | | | | | 1 | | | | | | | | | | |
| | 0/0496/0340 | 4_OR | 6 | 1 | | | | | | | | | | | | 5 | | | | |
| | 0/0520/0017 | 4_OR | 2 | | | | | | | | | | 2 | | | | | | | |
| | 0/0669/0036 | 4_OR | 3 | 1 | | | | | | | | | | | | 2 | | | | |
| | 0/0678/5015 | 4_OR | 1 | | | | | | | 1 | | | | | | | | | | |
| | 0/0735/0022 | 4_OR | 3 | | | | | | | | | | 3 | | | | | | | |
| | 0/0843/0008 | 4_OR | 3 | | | | | | 1 | | | | | | | 2 | | | | |
| | 1/1156/0018 | 4_OR | 1 | | | | | | | | | | | | | 1 | | | | |
| Total 1943 (%) | | | | 6 | | | | 2 | 6 | 20 | 4 | 4 | 14 | | | 24 | 2 | 4 | 2 | 12 |
| 1943 or 1944 | 0/0384/0066 | 4_OR | 2 | | | | | | | | 2 | | | | | | | | | |
| | 0/0678/5015 | 4_OR | 3 | | | | | | | | | | | | | 3 | | | | |
| Total 1943/44 (%) | | | | 5 | | | | | | | 40 | | | | | 60 | | | | |

and flourished at different times, enabling us to place them in chronological order.
The two eagles shaded in red are thought to be anachronistic replacements

**Figure 1.23**

The army tropical cap eagle. Types EA.1–4: early eagles. These four variants occur on the earliest tropical peaked caps. EA.1, 3 & 4 are also seen on later caps. The first is on a 1940-dated Lago, the second, an undated Lubstein, and the third, a 1941-dated Lubstein. The last was probably removed from a Berlago (in the *Database*, EA.4s occur on Berlagos and Greilings only). Type EB.1: early intermediate eagle. This variant is first seen on 1941-dated caps. This example is on a 1942-dated Alm. Not to scale. *Photos: author; Dal McGuirk; VirtualGrenadier*

Figure 1.24

More army tropical cap eagles. Type EB.2: early intermediate eagle. This variant, often associated with the manufacturer F. Weissbach, is first seen on 1941-dated caps. Types EC.1–9: later intermediate eagles. These variants are first seen on 1942-dated caps. The first is on an undated Greiling, the second a Mayser, the third on a Valet, the fourth and fifth on Vorwerk & Sohn, the sixth on a Kubach, the eighth on a Bruno Kern and the ninth on a Halfar. The seventh, type EC.7, is not original to the cap. Except for its silkier thread it is almost identical to type EB.1 and may have been made using the same (or same batch of) Jacquard cards. Eagle type EC.2 is almost indistinguishable from types EC.1 and EC.8, except for the shape of the second feather at the top of the middle of the three curving rows of feathers either side of the body, which is rectangular instead of chamfered off. Not to scale. *Photos: AKF; Jonathan del Collo; Bob Lyons; Barry Searson; Mark Twiname; VirtualGrenadier*



individual stitches comprising the background may also seem less distinct than those in early ones.

Describing the design of the different eagles requires some generalization and for details of the individual eagles the reader is referred to the figures (**Figures 1.23–1.25**). The principal distinguishing features are the configuration of the head and the beak; the eye; the three curving rows of feathers either side of the body, particularly the angle, shape and relative size of the individual feathers and the smoothness of the curve formed by the middle/bottom row, where it joins the outstretched wings to the legs; and the shape of the triangle between the legs. Also sometimes different are the thickness of the shoulder, the shape of the swastika, and the shape of the background between the shoulder and neck and the bottom of the wing and the wreath (e.g. **Figure 1.24**).



Figure 1.25

Late eagle types ED.1 & ED.2: These variants are first seen on 1943-dated caps. The first, on a Bayerische Mützen-Fabrik, may be a replacement (it is very similar to eagle EC.9, dated to 1942). The second is on an Aurel Huber. Not to scale. *Photos: VirtualGrenadier; WAF*

Eagle types EA.1–EA.4 appear to have been introduced in 1940, eagle types EB.1 and EB.2 in 1941, eagle types EC.1–EC.9 in 1942 and eagle types ED.1 and ED.2 in 1943 (**Table 1.4**). In **Table 1.4**, a 1940 or 1941 cap by Lago Berlin with a type EB.1 is assumed to belong to 1941 as EB.1s otherwise occur only on 1941 or later caps. Two other outliers, a type EC.4 on a 1941-dated Thomas and a type ED.2 on a 1942 Lago Mitteldeutschland, eagles types which are not otherwise associated with caps by these manufacturers or of these dates are assumed—provisionally—to be replacements (the Thomas is known to have passed through the hands a dealer notorious for selling undeclared restorations). Some types, such as the EA.1 and the EC.1 are obviously more common than others, while other—minority—types appear to be associated with particular manufacturers only: type EA.4, with Berlago, then Greiling; type EB.2, with Weissbach then Mayser-Milz; type EC.8 with Bruno Kern and type EC.9 with Halfar. The sample of these latter is small, however, and it is possible that the apparent associations are fortuitous.

Cockade

All cockade variants consist of a red, white and black roundel on a square background (**Figure 1.26**). They too are Bevo-woven. In the earliest (type CA), the square, which is reddish-yellow, is also Bevo-woven. These very early cockades were woven on a strip of tan or buff backing cloth with the sides of the square at 45° to the strip. When the cockade was attached to the cap, the unwoven backing cloth was folded behind the square on all four sides (**Figure 1.26**, top). Early intermediate (type CB.1), later intermediate (types CB.2 and CC) and late cockades (types CD.1 and CD.2) were woven on a narrower strip, ribbed and reddish-yellow, buff or very occasionally dark tan in colour in types CB.1 and CB.2, buff in colour and loosely woven with a rough surface in type CC, and light brown and ribbed in types CD.1 and CD.2. The edges of the strip formed two sides of the square, the other two being formed by folding over the strip's cut ends (**Figures 1.26**, middle & bottom). Both the weave and the backing cloth of late cockades have a noticeable rayon sheen (**Figure 1.26**, bottom).

As with eagles, describing the design of the different cockades requires some generalization and for details of the individual types the reader is referred to **Figure 1.26**. I have distinguished six types on caps in the *Database* but again it seems likely that there are more. Their principal distinguishable features are: the relative size of the ball and the relative thickness of the rings comprising the roundel; the texture of the weaving and of the backing cloth; and, on type CA cockades, the angle formed between the weave of the roundel and the weave of the square background, and, on type CB–CD cockades, between the weave of the roundel and the ribs of the backing cloth. Size and colour are also variable but they are difficult to distinguish in photos.

Thus in type CA cockades, a border of backing cloth is often visible outside the woven square (particularly when these have been applied using straight-lock stitch: **Figures 1.26**, top left & right & **1.27**, top); in later ones, because the square is not woven, there is no border. In type CA cockades, the woven lines of the square are *relatively* thick; in later ones, the ribs of the backing cloth, where present, are *relatively* thin. There is also a difference in the angles between these lines and the lines of weaving comprising the roundel: obtuse on types CA and CC, and close to right angles on types CB.1, CB.2, CD.1 and CD.2. On cockade types CA, CB.1 and CD.1, the rings comprising the roundels are homogeneous, on types CB.2, CC and CD.2 speckled (**Figure 1.26**). Finally, there is *usually* a difference in the thickness of the rings: on type CAs, the black ring narrower than the white; on types CB.1 and CB.2, the black the same thickness as the white; on type CD.1s, the black ring narrower than the white; and on types CC and CD.2 the black not only narrower than the white, but narrower (relatively) than the black on all others.

Cockade types CA and CB.1 were introduced in 1940, types CB.2, CC and CD.2 in 1941 and type CD.1 in 1942; CA, however, is by far the most



early



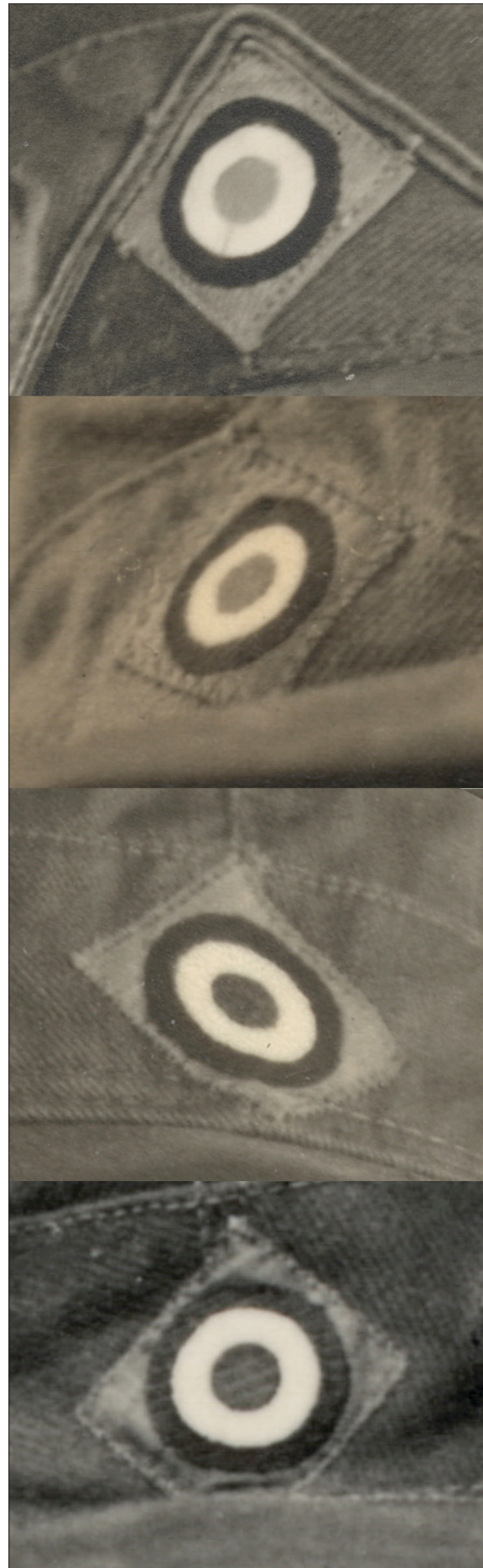
intermediate

late

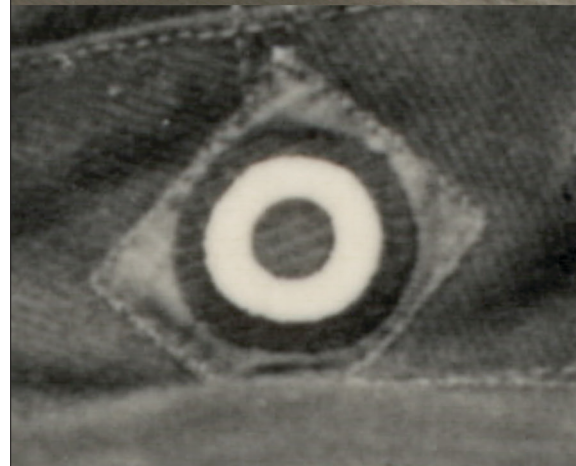


Figure 1.26

The army tropical cap cockade. Top: early (type CA) cockades. These occur on the earliest tropical caps and in smaller and smaller proportions on later caps. 1 is on 1941-dated Lubstein and 2, a 1940-dated Carl Halfar. Middle top & left: earlier intermediate (type CB.1) cockades. These occurred as early as 1940 but in tiny numbers. Their floruit was in 1941. 3 is on a 1940-dated Lago, and 4, an “aberrant” 1942-dated Schlesiische Mützenfabrik. Middle bottom and right: later intermediate cockades (types CB.2 & CC). These first appeared in 1941. 5 is on a 1942-dated Schlesiische Mützenfabrik and 6, on a 1942-dated Gebrüder Alm. Bottom: late cockades (types CD.1 & CD.2). CD.2s also first appeared in 1941 and CD.1s in 1942 but both are most frequently encountered on 1942 and 1943-dated caps. 7 is on a model 4_OR cap by Greiling and 8, a 4_OR by Carl Halfar. Note the unwoven margins around the square of the type CA cockades, and the different weaves (the presence or absence of speckling), backing cloths, colours and lustres and the thickness of the rings comprising the roundels. Not to scale. *Photos: Hiscoll Military Antiques; Chris Kihotis; Bob Lyons; Dal McGuirk; Erik Semenovs; Mark Vale; VirtualGrenadier*

**Figure 1.27**

Even in period photos cockade type may be identifiable. Top: type CA cockade. The different textures of the backing cloth (outside the stitching) and the Bevo-woven square are clearly visible. Middle: probable type CB.1 cockades. The principal diagnostic feature here are the similar thickness of the middle and outer rings. Bottom: type CD.1 cockade. Diagnostic here are the rayon sheen, the small ball and the narrow outer ring. Note the zigzag-lock stitch used to apply the three lower cockades. *Photos: author's coll.*



| Date | Manufacturer | Model | Qty of caps | Distinguishable cockade types | | | | | |
|--------------------|---------------------|-----------|-------------|-------------------------------|-----|-----|----|-----|-----|
| | | | | A | B.1 | B.2 | C | D.1 | D.2 |
| 1940 | Berlago | 1_OR | 4 | 4 | | | | | |
| | Halfar | 1_OR | 13 | 12 | 1 | | | | |
| | Lago | 1_OR | 7 | 4 | 3 | | | | |
| | Lubstein | 1_O, 1_OR | 8 | 8 | | | | | |
| | Schebeler | 1_OR | 2 | 1 | 1 | | | | |
| | SMF | 1_OR | 3 | 3 | | | | | |
| | Thomas | 1_OR | 3 | 3 | | | | | |
| Total 1940 (%) | | | | 87 | 13 | | | | |
| 1940/ 41 | Lubstein | 1_O, 1_OR | 4 | 4 | | | | | |
| | Schebeler | 1_OR | 1 | 1 | | | | | |
| | SMF (?) | 1_OR | 1 | | 1 | | | | |
| | Thomas | 1_OR | 2 | 2 | | | | | |
| Total 1940/ 41 (%) | | | | 87 | 13 | | | | |
| 1941 | Bergmann | 1_OR | 4 | 1 | 2 | | 1? | | |
| | Halfar | 1_OR | 4 | | 1 | | 3 | | |
| | Lago | 1_OR | 5 | | 4 | 1 | | | |
| | Lubstein | 1_O, 1_OR | 28 | 14 | 12 | | 2 | | |
| | Schebeler | 1_OR | 3 | 3 | | | | | |
| | SMF | 1_OR | 16 | 3 | 9 | 1 | 3 | | |
| | Sperb | 1_OR | 1 | | 1 | | | | |
| | Thomas | 1_OR | 6 | 5 | 1 | | | | |
| | Weissbach | 1_OR | 6 | | 3 | | | | 3 |
| Total 1941 (%) | | | | 36 | 45 | 3 | 12 | | 4 |
| 1941/ 42 | Greiling | 1_OR | 1 | | | | | 1 | |
| | SMF | 1_OR | 1 | | 1 | | | | |
| Total 1941/ 42 (%) | | | | | 50 | | | 50 | |
| 1942 | Halfar | 1_OR | 5 | | 1 | | 1 | | 3 |
| | Naubert | 1_OR | 1 | | 1 | | | | |
| | SMF | 1_OR | 16 | 1 | 8 | 3 | 4 | | |
| | Valet | 1_OR | 8 | | 7 | | | | 1 |
| | Alm | 2_OR | 2 | | | | 2 | | |
| | BMF | 2_OR | 1 | | 1 | | | | |
| | Greiling | 2_OR | 1 | | | | | 1 | |
| | Kubach | 2_O | 1 | | | | | 1 | |
| | Kurtze & Storckmann | 2_OR | 2 | | | | 2 | | |
| | LMD | 2_OR | 3 | | 1 | | | 2 | |
| | MFD | 2_OR | 5 | 4 | 1 | | | | |
| | Resolut | 2_OR | 1 | 1 | | | | | |
| | Halfar | 3_OR | 7 | 5 | | | 1 | | 1 |
| | Valet | 3_OR | 2 | | | | | | 2 |
| | BMF | 4_OR | 2 | | 2 | | | | |
| | Bruno Kern | 4_OR | 1 | 1 | | | | | |
| | Kubach | 4_O | 1 | | | | | 1 | |
| | MFD | 4_OR | 3 | | | 1 | | | 2 |
| | Obenhack | 4_OR | 1 | | | | | | 1 |
| | Resolut | 4_OR | 2 | | | | | 1 | 1 |
| | Vorwerk | 4_OR | 4 | | | | | | 4 |
| Total 1942 (%) | | | | 17 | 32 | 6 | 14 | 9 | 22 |
| 1942/ 43 | Bruno Kern | 4_O | 5 | 4 | | | | | 1 |
| | Greiling | 4_OR | 5 | | | | | 5 | |
| | Kubach 4_O | 4_OR | 1 | | | | | 1 | |
| | Resolut | 4_OR | 2 | | | | | 1 | 1 |
| | Ernst Kern | 5_OR | 6 | | | | | 2 | 4 |
| Total 1942/ 43 (%) | | | | 21 | | | | 47 | 32 |

Table 1.5

Cockades distinguishable to type in the *Database*. As with eagles, different types appeared and flourished at different times. The cockades shaded buff belong to the very end of 1941

| Date | Manufacturer | Model | Qty of caps | Distinguishable cockade types | | | | | |
|---------------------------|----------------------|-------|-------------|-------------------------------|-----------|-----|----------|-----------|-----------|
| | | | | A | B.1 | B.2 | C | D.1 | D.2 |
| 1943 | BMF 0/0850/0387 | 4_OR | 4 | | | | | | 4 |
| | Halfar 0/0250/0906 | 4_OR | 5 | | | | | | 5 |
| | Häussler | 4_OR | 1 | | 1 | | | | |
| | Huber | 4_OR | 1 | | 1 | | | | |
| | Kubach | 4_OR | 2 | | 2 | | | | |
| | Mayser 0/0843/0012 | 4_OR | 9 | | | | | | 9 |
| | Obenhack 0/0721/0074 | 4_OR | 1 | | | | | | 1 |
| | Ottmar Reich | 4_OR | 5 | | 2 | | | | 3 |
| | Schellenberg | 4_OR | 2 | | | | | | 2 |
| | Straube | 4_OR | 4 | | | | | | 4 |
| | Valet | 4_OR | 1 | | 1 | | | | |
| | Wolber & Plaff | 4_OR | 2 | | | | | | 2 |
| | 0/0496/0340 | 4_OR | 8 | | | | 1 | | 7 |
| | 0/0520/0017 | 4_OR | 5 | | | | | 2 | 3 |
| | 0/0669/0036 | 4_OR | 3 | | | | | 3 | |
| | 0/0678/5015 | 4_OR | 3 | | | | | 1 | 2 |
| | 0/0735/0022 | 4_OR | 2 | | | | | | 2 |
| | 0/0843/0008 | 4_OR | 4 | | | | | | 4 |
| | 0/1156/0018 | 4_OR | 2 | | | | | | 2 |
| Total 1943 (%) | | | | | 10 | | 1 | 10 | 79 |
| 1943/ 44 | 0/0384/0066 | 4_OR | 3 | | | | | 1 | 2 |
| | 0/0678/5015 | 4_OR | 4 | | | | | 1 | 3 |
| Total 1943/ 44 (%) | | | | | | | | 29 | 71 |

common type on caps of 1940-date, whereas type CB.1 dominates on caps dated 1941 and 1942 and CD.2 on caps dated-1943 (**Table 1.5**). Types CB.2 and CC appear always to have been minority types, though it is possible that type CB.2 is unrepresented in the *Database* owing to its similarity to type CB.1, with which individual examples may have been confused. As with the tropical cap eagle, particular cockade types also appear to be particularly associated with particular manufacturers at particular times. There is also an association of particular types with particular types of cap. In 1941, for example, Weissbach only applied cockade type CD.2 to its caps, while in 1942/ 1942–43, type CA, by this date a minority type, occurs on four out of five model 2_OR caps by Mützen-Fabrik Dreßen, five out of seven model 3_ORs by Carl Halfar and five out of six model 4_Os and 4_ORs by Bruno Kern, and hardly any other caps (**Table 1.5**). Two possible explanations suggest themselves for the latter distribution: these cockades were old stock obtained directly from the insignia manufacturer or old stock obtained from earlier manufacturers that had ceased manufacturing the tropical peaked cap. (The same thing is suggested by the distribution of some minority eagle types. As acknowledged, however, the numbers are small and it is possible that their apparent associations are fortuitous).

Soutache

The soutache present on model 1_O, 1_OR, 2_O and 2_OR caps was of “Russia” braid, in which two clusters of thick thread are each wrapped by finer, silky thread in a herringbone pattern (**Figure 1.28**). The colour of the braid was intended to indicate the branch of service to which the wearer



Figure 1.28

Detail of a pink (Panzer) soutache and speckled, later intermediate type CB.2 cockade on a 1942-dated Schlesische Mützenfabrik. The cap is in my fabric IT.

Photo: VirtualGrenadier

belonged, though sometimes supplies of caps with the correct coloured braid were not available, and the original soutache either had to be replaced (e.g. **Figure 1.9**, top right) or a cap with the wrong colour of soutache braid worn (McGuirk 1987, 135–9). A lumpy, knotty appearance seen in many is caused by shrinkage and wear to the outer wrapping, which allows the underlying threads to push through it (**Figure 1.28**). These threads may be of the same colour as the silky wrapping (**Figure 1.28**), lighter (**Figure 1.50**, bottom) or very occasionally darker. In some cases, this difference in colour is original to the braid; in others it is attributable to differential bleaching. I have not attempted to distinguish the varying lustres noted by some commentators in the soutache's outer wrapping for in caps in the *Database*.

Most manufacturers of caps with soutaches made them with soutaches of a variety of different colours. Out of the 20 manufacturers of model 1_O, 1_OR, 2_O and 2_OR caps represented in the *Database*, 12 made caps with lime green soutaches (36 caps), nine with black (11 caps), eight with pink (30 caps), eight with green (22 caps), seven with light blue (13 caps), seven with white (7 caps), five with red (11 caps), four with dark blue (4 caps) and so on. No manufacturer can be shown not to have made caps with soutaches of a particular colour. Some, however, appear to have made proportionately more caps with soutaches of one colour than another. Of the 10 1940-dated caps with lime green soutaches in the *Database*, nine were by Carl Halfar; of the

13 Lago Berlins whose soutache colour we know, 11 are or were pink; while of the 11 caps with factory applied red soutaches, six are by Schlesische Mützenfabrik. Also possibly of note is the high proportion of red period-replaced soutaches (four out of the six in the *Database*) (**Digital Appendix 1**).

CAP STRUCTURE

The WW2 German army tropical peaked cap was assembled from between 13 and 16 separate pieces of cloth, two or three pieces of insignia (the eagle, cockade and soutache), a card peak stiffener and four eyelets, each consisting of two separate pieces of metal riveted together. The sequence of assembly of these parts—inferred from photos in the *Database* and summarized in **Figure 1.29**—was more or less standardized across all manufacturers. This sequence determines what can be (and what should not be) seen in an unmodified authentic cap. Also standardized—up to a point—were the materials used. Only very few fabric types and ventilation eyelet types are distinguishable in caps in the *Database*. Thus, even if all the possible combinations of these things were employed, and they were not, there would still only be a very small number of possible ones.

The other side of the interpretative coin is variability. Although all manufacturers of the tropical peaked cap adhered to this general standard, they also displayed some individuality in the way they assembled their caps and in the materials they actually used. In particular, sewing (**Figures 1.34–1.36**) and the way ventilation eyelets were riveted (**Figures 1.37 & 1.38; Table 1.8**) and configured on the cap varied from manufacturer to manufacturer, while some manufacturers appear to have had access to particular materials only, or to have favoured some materials over others (**Tables 1.6–1.7**). Additionally, for some manufacturers, individual traits varied over time. Between 1940 and 1941, for example, Lago Berlin changed the way it attached its soutaches (**Figures 1.46 & 1.47**) and Robert Lubstein, the twill type it used for the exterior of the cap (**Table 1.6**). Thus structure provides further evidence for the nature of manufacturer organization and resource procurement, and, in association with the other traits discussed here, is diagnostic of cap date and manufacturer.

Fabric

It is impossible to assess fabric texture and colour from photos alone, partly because cloth has characteristics, such as stiffness and thickness, which just don't show in photos, and partly because so many photos are out of focus and/ or lit in such a way that they fail to bring out or distort the cap's true texture and colour.

The outer shell and peak of a typical early German army tropical peaked cap is made from heavy cotton twill. At least two frequently reoccurring variants, or groups of variants are distinguishable, one in which the weave

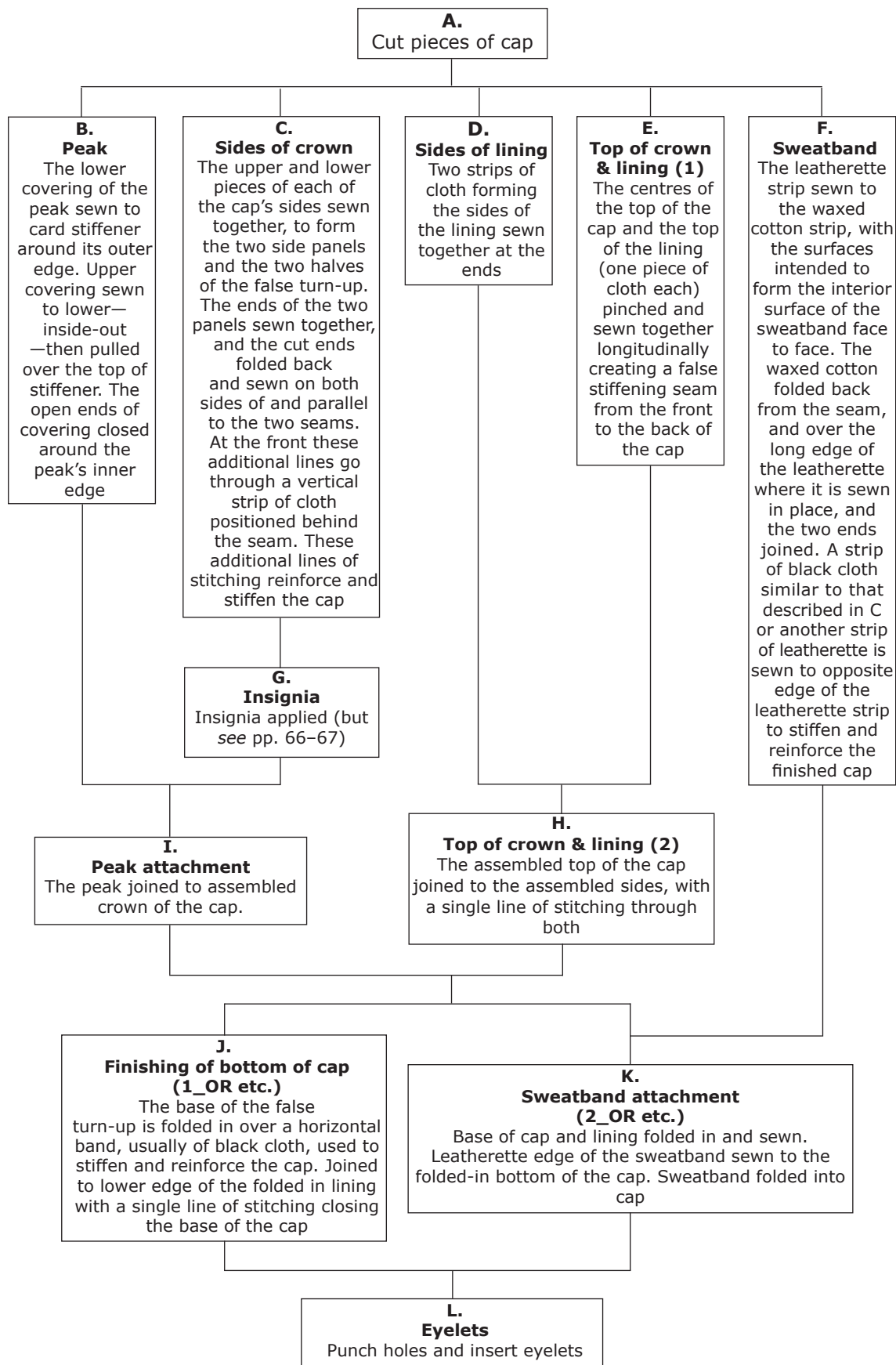


Figure 1.29

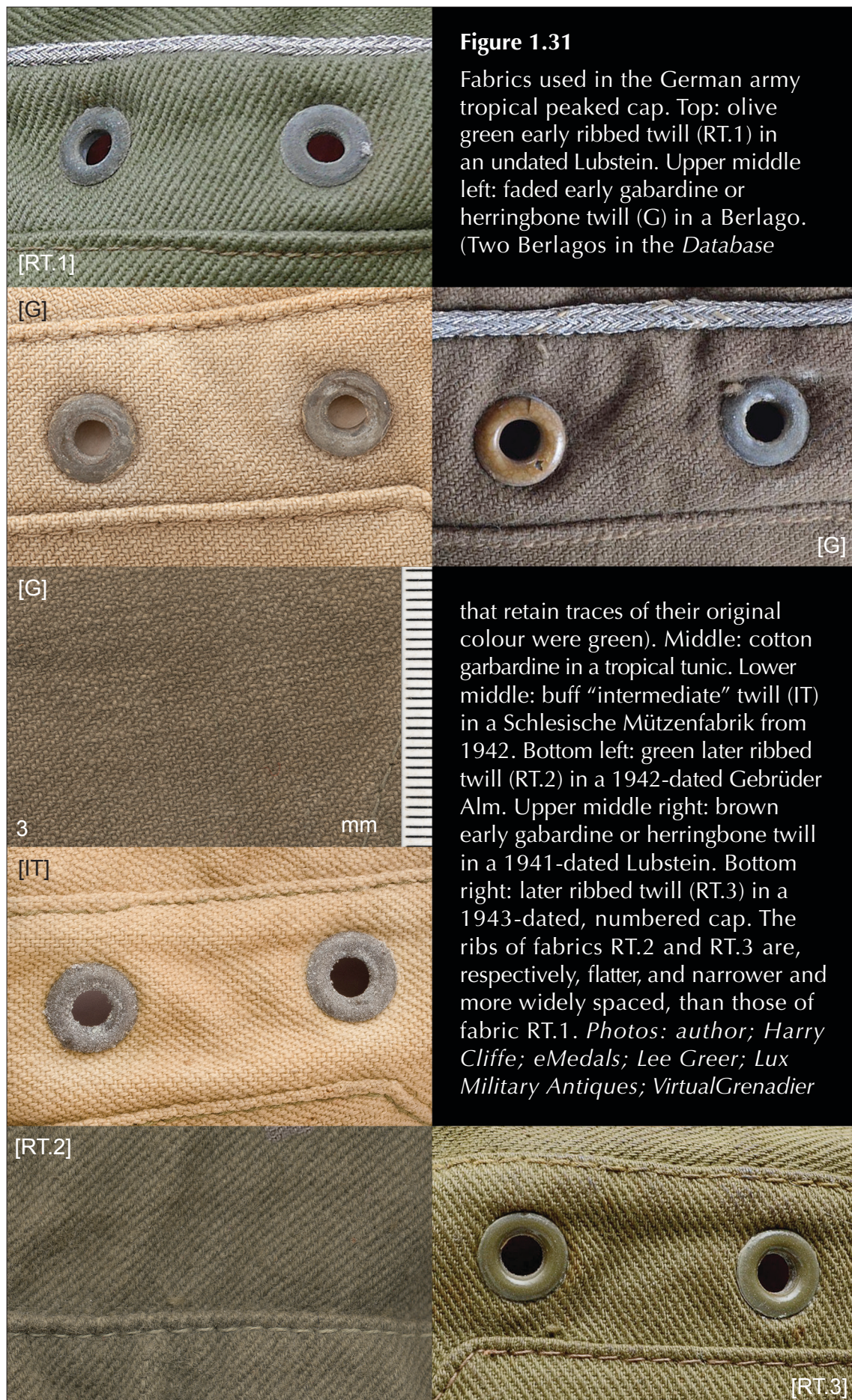
Standard cap assembly sequence inferred from visible cap stitching



Figure 1.30

Left: interior of the brow of a weathered 1941-dated model 1_OR cap by Schlesische Mützenfabrik. Visible are, from the top of the photo to the bottom, the underside of the peak, the folded-in lining, sewn to the base of the brow of the cap, the folded-in peak covering, a band of black stiffening cloth (far left), which circles the cap, a vertical strip of (red-lining) cloth behind the cap's frontal seam (the line of stitching at 45° to this is a relic of the soutache attachment), the seam(s) joining the false turn-up to the upper part of the brow, and the attachment of the top of the lining to the inside top of the crown. The fading of the inside of the fabric comprising the crown probably indicates that this cap has been chemically bleached (cf. **Figure A2.3**). Right: a band of black stiffening cloth identical to that in the Schlesische visible through a hole in the exterior of a Lubstein. *Photos: Jonathan del Collo; Lee Greer*

of the successive “drills” goes (in fact *appears* to go) in the same direction, forming a series of ribs (fabric type RT.1) (**Figure 1.31**, top), and one in which it goes in opposite directions, forming a fine herringbone pattern or gabardine (fabric type G) (**Figure 1.31**, upper middle & middle left). For the early period, olive (**Figure 1.31**, top left), sage or blue green (**Figure 1.56**) and grass green (**Figure 1.45**, top), buff (**Figures 1.31**, lower middle left, **1.32**, top & **A2.3**, right) and brown variants (**Figure 1.31**, upper middle right) are distinguishable (cf. McGuirk 1987, 140, 181; Pritchett 2014, 254pp.). These twills are indistinguishable from those used for early tunics and some other parts of the tropical uniform (McGuirk 1987, 140; Borg & Twiname 2010, 25) (e.g. **Figure 1.31**, middle left; Pritchett 2014, 278 & 289; Seager Thomas 2018, fig. 2). Halfar additionally used a stripy variant of fabric type G (fabric G.2) (**Figure 1.45**, lower middle & bottom) and Lubstein a coarse plain weave or cotton duck (fabric CD) (**Figure 1.32**, bottom). The cotton gabardines, and to a lesser extent, the coarse ribbed fabrics continued in use for some time (**Table 1.6**). However, the fabrics comprising the outer shells of later caps are



often of a lighter weight (McGuirk 1987, 181). Three reoccurring variants, or groups of variants are easily distinguishable. The first is similar to the early herringbone twill but its weave is both less symmetrical and less tightly woven (fabric type IT) (**Figure 1.32**, lower middle). Originally buff in colour, it was prone to fading. The second (fabric type RT.2) is similar to the early ribbed twill, fabric type RT.1, but the ribs appear to be flatter and the thread comprising them looser (**Figures 1.31**, bottom left & **1.65**). The third (fabric type RT.3) is also similar to the early ribbed twill but its ribs are narrower and there is a proportionately wider furrow between them (**Figure 1.31**, bottom right). Both of these were *usually* originally green and reasonably colourfast. Possibly there was also a “lighter” version of fabric type G,

Figure 1.32

Fabric variants. Top: tan, 1941-dated 1_O cap by Robert Lubstein (fabric type G). Middle: two-toned model 1_OR caps by Lubstein (fabric type G) and an unknown manufacturer. (Three caps in the *Database* were originally of two different colours, or comprised fabrics whose dyes faded at a different rate). Bottom: model 1_OR cap by Lubstein in cotton duck (fabric CD). Note the standard, later Lubstein insignia attachment, the different cockades, and the presence of an unfaded shadow where the soutache was formerly attached on one cap and the lack of such a shadow on another. The two-toned Lubstein was the souvenir of a British 8th Army driver. *Photos: Mike Donne coll.; Thoms (AKF); VirtualGrenadier; WAF*



| Date | Manufacturer | Model | Qty of caps | Fabric(s) | | | | | | | | |
|----------|---------------------|-------|-------------|-----------|----|----|-----|-----|----|------|------|------|
| | | | | RT.1 | G | CD | G.2 | G.3 | IT | RT.2 | RT.3 | RT.4 |
| 1940 | Berlago | 1_OR | 4 | | 4 | | | | | | | |
| | Halfar | 1_OR | 14 | 5 | 9 | | | | | | | |
| | Lago | 1_OR | 9 | | 9 | | | | | | | |
| | Lubstein | 1_OR | 10 | 8 | 2 | | | | | | | |
| | SMF | 1_OR | 3 | | 3 | | | | | | | |
| | Schebeler | 1_OR | 2 | | 2 | | | | | | | |
| | Thomas | 1_OR | 3 | | 3 | | | | | | | |
| 1940/ 41 | Lago | 1_OR | 2 | | 2 | | | | | | | |
| | Lubstein | 1_OR | 4 | 2 | 2 | | | | | | | |
| | Schebeler | 1_OR | 1 | | 1 | | | | | | | |
| | Thomas | 1_OR | 2 | 1 | 1 | | | | | | | |
| 1941 | Bergmann | 1_OR | 4 | | 4 | | | | | | | |
| | Halfar | 1_OR | 5 | | 1 | | 4 | | | | | |
| | Lago | 1_OR | 5 | | 5 | | | | | | | |
| | Lubstein | 1_OR | 33 | 4 | 27 | 2 | | | | | | |
| | Schebeler | 1_OR | 3 | | 3 | | | | | | | |
| | SMF | 1_OR | 20 | 13 | 7 | | | | | | | |
| | Sperb | 1_OR | 1 | 1 | | | | | | | | |
| | Thomas | 1_OR | 6 | 1 | 5 | | | | | | | |
| | Weissbach | 1_OR | 6 | | | | | | | | 6 | |
| 1941/ 42 | Greiling | 1_OR | 2 | | | | | | | | 2 | |
| | SMF | 1_OR | 1 | | 1 | | | | | | | |
| 1942 | Halfar | 1_OR | 6 | | 5 | | 1 | | | | | |
| | Naubert | 1_OR | 1 | | | | | | | | | 1 |
| | SMF | 1_OR | 18 | 3 | 5 | | | | 10 | | | |
| | Valet | 1_OR | 9 | | | | | | | 8 | 1 | |
| | Alm | 2_OR | 2 | | 1 | | | | | 2 | | |
| | BMF | 2_OR | 1 | | | | | | 1 | | | |
| | Greiling | 2_OR | 2 | | 2 | | | | | | | |
| | Kubach | 2_O | 1 | | 1 | | | | | | | |
| | Kurtze & Storckmann | 2_OR | 2 | | | | | | | 2 | | |
| | LMD | 2_OR | 4 | | | | | | | 3 | 1 | |
| | MFD | 2_OR | 6 | | | | | 6 | | | | |
| | Resolut | 2_OR | 1 | | 1 | | | | | | | |
| | Halfar | 3_OR | 5 | | 4 | | 1 | | | | | |
| | Valet | 3_OR | 2 | | | | | | | | 2 | |
| | BMF | 4_OR | 2 | | | | | | | 1 | 1 | |

Table 1.6

Distinguishable outer shell/ peak fabric types in caps in the *Database*. Rows shaded in buff include individual caps made out of more than one fabric. Fabric types RT.1, CD (associated exclusively with Lubstein) and G.2 (associated exclusively with Carl Halfar) were short-lived. Berlago and Lago appear to have used one fabric only (fabric type G) while Lubstein, Schlesische and Valet changed the fabrics they used (RT.1 to G, RT.1 and G to IT and RT.2 to RT.3).

| Date | Manufacturer | Model | Qty of caps | Fabric(s) | | | | | | | | |
|---------------|----------------------------|-----------|-------------|-----------|---|----|-----|-----|----|------|------|------|
| | | | | RT.1 | G | CD | G.2 | G.3 | IT | RT.2 | RT.3 | RT.4 |
| 1942 cont. | Grote | 4_OR | 1 | | | | | | | | 1 | |
| | Bruno Kern | 4_OR | 1 | | | | | | | | 1 | |
| | Kubach | 4_O, 4_OR | 3 | | 2 | | | | | | 1 | |
| | MFD | 4_OR | 3 | | | | | 3 | | 1 | | |
| | Obenhack | 4_OR | 1 | | | | | | 1 | | | |
| | Resolut | 4_OR | 2 | | 1 | | | | | | | |
| | Teufel | 4_OR | 2 | | 1 | | | | | | 1 | |
| | Vorwerk & Sohn | 4_OR | 4 | | 2 | | | 2 | | | | |
| 1942/ 43 | Bruno Kern | 4_O | 8 | | | | | | | | 8 | |
| | Greiling | 4_OR | 5 | | 3 | | | | | | 2 | |
| | Kubach | 4_O, 4_OR | 2 | | 1 | | | | | | 1 | |
| | Resolut | 4_OR | 3 | | 3 | | | | | | | |
| | Ernst Kern | 5_OR | 4 | | | | | | | | 4 | |
| 1943 | BMF 0/0850/0387 | 4_OR | 5 | | 1 | | | | | 4 | | |
| | Halfar 0/0250/0906 | 4_OR | 10 | 1? | 5 | | | | 3 | | 1 | |
| | Häussler | 4_OR | 1 | | | | | | | | 1 | |
| | Huber | 4_OR | 2 | | | | | | | | 2 | |
| | Kubach | 4_OR | 3 | | 3 | | | | | | | |
| | Mayser-Milz 0/0843/0012 | 4_OR | 10 | | | | | | | 1? | 9 | |
| | Obenhack 0/0721/0074 | 4_OR | 1 | | 1 | | | | | | | |
| | Ottmar Reich | 4_OR | 7 | | | | | | | | 7 | |
| | Schellenberg | 4_OR | 2 | | 2 | | | | | | | |
| | Straub | 4_OR | 4 | | 1 | | | | | 1 | 2 | |
| | Valet | 4_OR | 1 | | | | | | | | 1 | |
| | Wolber | 4_OR | 2 | | | | | | | | 2 | |
| | 0/0496/0340 | 4_OR | 9 | | | | | | | | 9 | |
| | 0/0520/0017 | 4_OR | 6 | | 6 | | | | | | | |
| | 0/0669/0036 | 4_OR | 4 | | 2 | | | | | | 2 | |
| | 0/0678/5015 | 4_OR | 4 | | 4 | | | | | | | |
| | 0/0735/0022 | 4_OR | 2 | | | | | | | | 2 | |
| | 0/0843/0008 | 4_OR | 5 | | | | | | | | 5 | |
| | 1/1156/0018 | 4_OR | 2 | | 2 | | | | | | | |
| 1943/ 44 | 0/0384/0066 | 4_OR | 3 | | | | | | | | 3 | |
| | 0/0678/5015 | 4_OR | 5 | | 5 | | | | | | | |

but this is not distinguishable in photos. I know of tunics and shoulder boards in fabric type RT.3 (e.g. Pritchett 2014, 269), but I have not seen tunics or shoulder boards in fabric types IT or RT.2.

The linings of all but one of the caps in the *Database* are of red plain weave (McGuirk 1987, 140) (e.g. **Figures 1.4–1.5 & 1.37**). The exception, in a model 2_OR cap by Kurtze & Storckmann, is of coarse red satin weave.³

Sweatbands come in a variety of fabric combinations (**Table 1.7**). The earliest are reported to have been wholly of cotton (Borg & Twiname 2010,

| Manufacturer | Model | Qty of caps | Cloth | | | | Leatherette | | | |
|----------------------------|-------|-------------|-------------|----------|------------|---------|-------------|-----------|------------|-------------|
| | | | green twill | green pw | buff twill | buff pw | buff | dark grey | dark brown | black green |
| Alm | 2_OR | 2 | 2 | | | | 2 | | | |
| BMF | 2_OR | 1 | | | | 1 | 1 | | | |
| Greiling | 2_OR | 2 | 1 | | 1 | | 1 | | 1 | |
| Kubach | 2_O | 1 | 1 | | | | | | 1 | |
| Kurtze & Storckmann | 2_OR | 2 | | | | 2 | 2 | | | |
| LMD | 2_OR | 3 | | 3 | | | 2 | | | |
| MFD | 2_OR | 3 | 2 | | 1 | | 3 | | | |
| Resolut | 2_OR | 1 | 1 | | | | 1 | | | |
| BMF 0/0850/0387 | 4_OR | 7 | 1 | 1 | | 5 | 7 | | | |
| Greiling | 4_OR | 5 | 4 | | | | 5 | | | |
| Grote | 4_OR | 1 | | 1 | | | 1 | | | |
| Halfar 0/0250/0906 | 4_OR | 6 | | 5 | | | 5 | | | |
| Häussler | 4_OR | 1 | | | | 1 | 1 | | | |
| Huber | 4_OR | | | | | 2 | 2 | | | |
| Bruno Kern | 4_O | 6 | 6 | | | | | | | 6 |
| | 4_OR | 1 | | | | 1 | | | | 1 |
| Kubach | 4_O | 7 | 6 | | | | 7 | | | |
| | 4_OR | | | | | | | | | |
| Mayser-Milz 0/0843/0012 | 4_OR | 10 | | 6 | | 2 | 7 | | | |
| | | | | 1 | | | | | | 1 |
| MFD | 4_OR | 3 | 2 | | | | 2 | | | |
| Obenhack 0/0721/0074 | 4_OR | 2 | | 2 | | | 2 | | | |
| Resolut | 4_OR | 6 | 5 | | | | 6 | | | |
| Teufel | 4_OR | 1 | | 1 | | | | | 1 | |
| Schellenberg | 4_OR | 2 | 2 | | | | 2 | | | |
| Straub | 4_OR | 4 | | 1 | | 3 | 4 | | | |
| Vorwerk & Sohn | 4_OR | 4 | 3 | | | | 3 | | | |
| Ottmar Reich | 4_OR | 7 | | | 7 | | 3 | | 2 | |
| Valet | 4_OR | 1 | | | | 1 | | | 1 | |
| Wolber & Plaff | 4_OR | 2 | | 1 | | 1 | | | 2 | |
| 0/0384/0066 | 4_OR | 3 | | | | 3 | 2 | | | |
| 0/0496/0340 | 4_OR | 9 | | 9 | | | 9 | | | |
| 0/0520/0017 | 4_OR | 5 | | 5 | | | 5 | | | |
| 0/0669/0036 | 4_OR | 4 | 2 | 2 | | | 4 | | | |
| | | 3 | 3 | | | | 3 | | | |
| 0/0678/5015 | 4_OR | 5 | 4 | 21 | | | 5 | | | |
| 0/0735/0022 | 4_OR | 3 | | 3 | | | 2 | 1 | | |
| 0/0843/0008 | 4_OR | 4 | 3 | 1 | | | 1 | 3 | | |
| 1/1156/0018 | 4_OR | 2 | | 2 | | | 2 | | | |
| Ernst Kern | 5_OR | 4 | | | | 4 | 4 | | | |

Table 1.7

Sweatband fabrics of caps in the *Database*. The combinations of fabrics used by some manufacturers is consistent and sometimes unique. pw = cotton plain weave

Figure 1.33

Sweatband in a 1942-dated model 2_OR cap by Gebrüder Alm. The band comprises a sandwich of green ribbed twill (fabric type RT.2) and tan leatherette, the undyed plain weave backing of which is shown. Sewn to the bottom is an additional strip of leatherette, which stiffens the cap. On this cap, the leatherette fold joining the band to the rest of the cap has lost most of its surface. Note the end of the black soutache between the covering of the peak and the folded-over base of the cap's brow. *Photos: author*

28). Most of those on caps in the *Database*, however, consist of a leatherette fold, which joins a cotton plain weave (**Figures 1.18**, left & **1.19**) or cotton twill band to the cap (**Figure 1.33**). Reinforcing the band along its inner edge is a strip, either of the same leatherette (**Figure 1.33**) or a thin black papery fabric with a muslin backing (**Figures 1.66** & **1.70**). The leatherette comes in black (**Figure 1.18**, right), brown (**Figure 1.78**), buff/tan (**Figures 1.16**, **1.18**, left & **1.19**) and grey; the cotton band—both plain weave and twill—in buff (**Figures 1.16** & **1.19**) and olive green (**Figure 1.18**). In a number of caps handled by me, the cotton plain weave bands appear to have been deliberately waxed, but this feature is visible in only a

³ A handful of possibly authentic caps, one reportedly taken off a dead soldier in 1945 (WAF 2011c) and another dated 1944, have red twill linings, steel ventilation eyelets and, in several cases, sweatbands wholly of brown leatherette. All are assumed to be late and therefore fall outside this study.



handful of caps in the *Database*. A few 1942 and 1943-dated caps in the *Database* have sweatbands wholly of buff leatherette (e.g. Borg & Twiname 2010, 37). Possibly, however, these bands have lost their original cotton parts.

Stitching

On the underside of the peak of the tropical peaked cap, running around its curved outer edge, there are *always* one or two lines of machine straight-lock stitch (**Figures 1.34 & 1.35**). These attached the lower part of the peak's fabric cover to the card peak stiffener. After this was done, the upper part of the peak's fabric cover was joined to the lower, inside-out, and pulled up over the card stiffener, the overlapping fabric forming the swelling normally seen around the peak's upper edge (e.g. **Figure 1.12**, bottom). On some caps a line of stitching can be seen between the brow of the cap and the peak where the inner ends of the peak cover were joined (**Figure 1.36**, MPO).

On the outside of the cap a minimum of nine lines of machine straight-lock stitch are *usually* visible. Two horizontal lines join the two strips of cloth that form each side of the cap, around the top of the false turn-up (e.g. **Figure 1.13**). At the front and back, two vertical seams (the stitching of which is usually invisible), which join the two side panels, are each flanked by two further reinforcing lines, at the front through a strip of cloth positioned vertically behind the seam (**Figures 1.30, 1.41 & A2.3**). Another line joins the ring of cloth formed from the two assembled side panels to the top of the cap and the lining (e.g. **Figure 1.13**). Finally, a varying number of lines around the bottom of the cap join the peak to the now assembled outer shell, the outer shell and peak to the lining, and, where present, the sweatband to the outer shell and, in some caps, the bottom of the lining (**Figures 1.36**). Sometimes these lines overlie each other. Where a soutache is folded between the brow of the cap and the peak (and sometimes where it is cut into the brow), the lines at the bottom of the cap overlie this (**Figures 1.39**, bottom & **1.53**, top), but, except where a soutache has been replaced, never underlie it. Likewise, they also often overlie the cockade (**Figure 1.26**, 9 & 11), but only very rarely underlie it (**Figure 1.16**).

On the inside of the cap a minimum of three lines of straight-lock stitch are visible: the reverse of the line joining the ring formed from the assembled side panels to the top of the cap and the lining; the reverse of the line joining the bottom of outer shell to the bottom of the lining; and in a false seam from front to back, joining the top of the shell to the top of lining (e.g. **Figures 1.6, 1.7 & 1.46**). At least five lines are visible in the sweatband, including the reverse of the line joining it to the bottom of the cap (e.g. **Figure 1.33 & 1.76**).

A largely unsung characteristic by which tropical peaked caps by different manufacturers can be told apart is the configuration of the lines on the underside of their peaks (**Figure 1.35**). Key here are the number of lines, and the spacing of these in relation to each other and the edge of the peak. On some caps by different manufacturers, the stitching on the underside



Figure 1.34

Under-peak stitching. In the *Database*, the combination of a single line of stitching far from the edge of the peak and a cockade applied using zigzag-lock stitch (top) is associated exclusively with caps by Gebrüder Alm. *Photos: author's coll.*



of their peaks is similar; on others by the same manufacturer, quite variable. (Where the stitching on the underside of the peak consists of two lines, these are often not parallel. On these caps we can assume that the individual lines were sewn sequentially and not on a machine with two needles; it was inevitable therefore that there would be some variability: e.g. **Figure 1.6**, lower middle & **A2.1**). But in caps or groups of caps by some manufacturers, notably Thomas and Valet but also others, it was both distinct and recurrent (**Figures 1.18**, **1.35**, **1.41** etc.). In combination with the other variables discussed in this essay, therefore, the configuration of the sewing on the underside of the peak can be a very useful diagnostic tool (**Appendix 2**).

Also sometimes diagnostic, at least of groups of manufacturers, are the multiple lines of stitching immediately above the peak. On caps without sweatbands, the lines tend either to consist of a single, usually quite straight, multiply overlain line, or two or three meandering, only partially overlain lines (**Figure 1.36**, top four photos). On caps with sweatbands, the various lines may follow the same line, be placed close together, or quite widely apart (**Figure 1.36**, bottom four photos).

Finally of note are the colour of the cotton and the length of the individual stitches. While the colour of the exterior stitching of many caps—at least as it comes down to us—is similar to that of the twill parts of the cap, and the same throughout, there are deviations

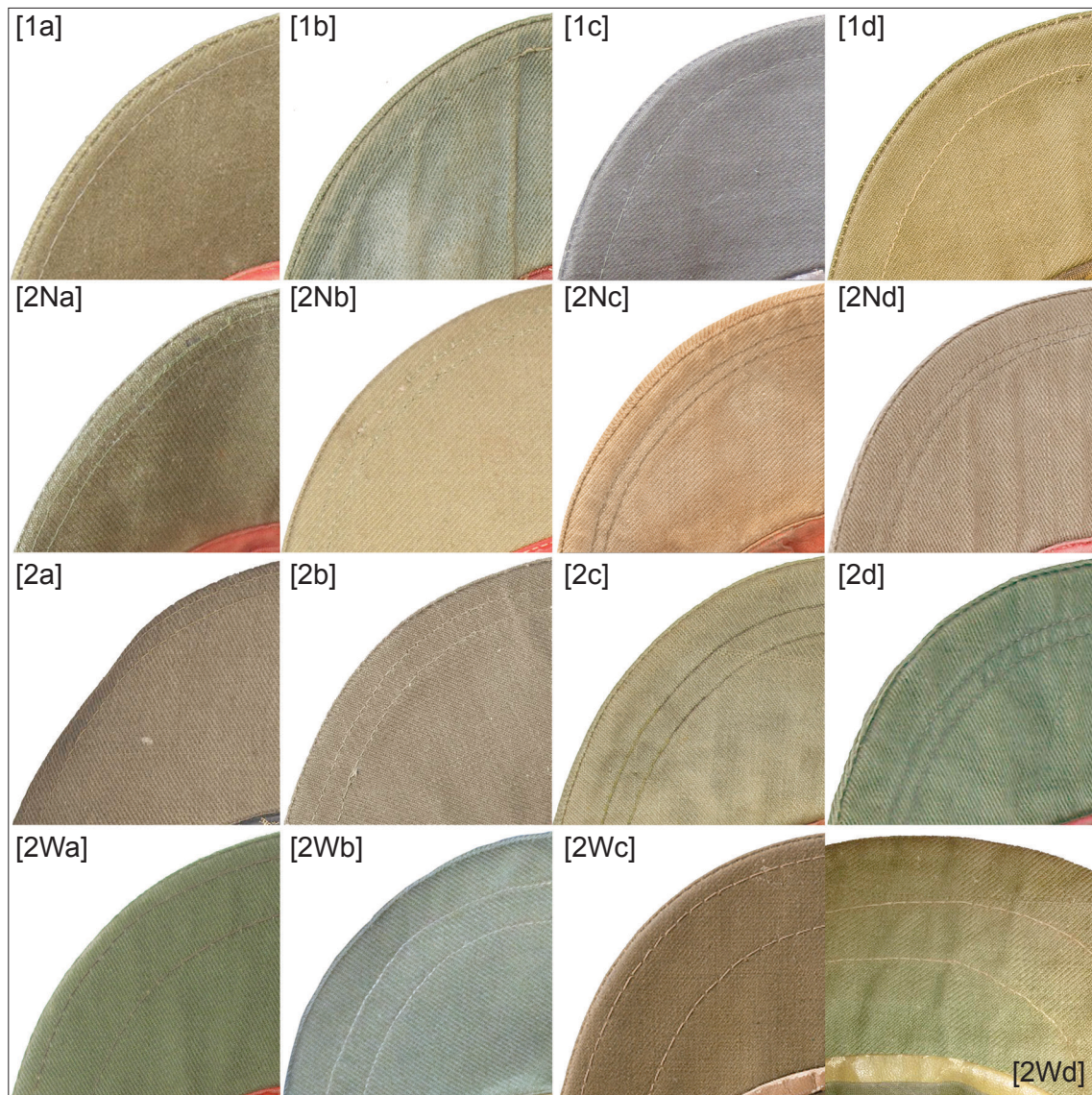


Figure 1.35

Under-peak stitching. Not as consistent as some other features of cap construction, the configuration of the lines of stitching on the underside of the peak of the cap can nonetheless be diagnostic of manufacturer. 1940–43: 1a and 1b are typical of caps by Lubstein, Bayerische Mützen-Fabrik (late caps only), Mayser-Milz and 0/0496/0340-numbered caps, 1d of Kubach and Sperb, 2Na of Bruno Kern, 2Nc of Berlag, 2Nd of Valet, 2d of Weissbach, 2Wa of Thomas, 2Wb of Resolut and 2Wc of one of the two recurrent variants of 0/0678/5015 numbered caps, etc. Bergmann and Mützen-fabrik Dreßen are at the wide end of 2c or the narrow end of 2Wb. Post-1943 only: 2Wd, number 0/0665/6089. Not to scale. *Photos: Auckland War Memorial; Harry Cliffe; Hermann Historica Auctioneers; Frédéric Ruelle; Barry Searson; Jeffrey Slaker; VirtualGrenadier*

from this rule, some of which are diagnostic of different phases of assembly and different manufacturers. (Others may be indicative of later modification). Uniquely, for example, caps by Robert Lubstein were sometimes partially sewn using grey thread (**Figure 1.49**, top). Likewise stitch length. One manufacturer, F. Weissbach, consistently used a longer stitch than that used

Figure 1.36

The different configurations of lines sewn immediately above the cap peak by different manufacturers. The different lines of stitching relate to the sewing on of the peak, the attachment of the sweatband and the closing of the bottom of the cap. These stages occurred at different times and were sometimes carried out using cotton of different colours. The colour or colourfastness of cotton used by different manufacturers also varied. SO (top): Lago Berlin; MPO: Carl Halfar (1_OR); M: Emil Schebeler; MWPO: later Schlesische Mützenfabrik (note the speckled outer ring of the cap's CB.2 cockade); 2WS: Carl Halfar (4_OR); 2CS: Bruno Kern; SO-M: 0/0678/5015; SO (bottom): 0/0496/0340. Photos: AKF, Bob Lyons; Erik Seminovs; VirtualGrenadier, WRF

by most manufacturers most of the time (**Figure 1.39**, bottom), while a longer stitch is sometimes associated with one phase of assembly, such as that of the peak, but not the others.

Ventilation eyelets

The riveting, colour, metal, spacing and position (in relation to the end of the cap's false turn-up) of the tropical peaked cap's ventilation eyelets are central both to separating real caps from fakes and assigning the former to one manufacturer or another. (**Figures 1.37 & 1.38; Table 1.8**). A *standard* issue cap has two on each side above the false turn-up. These are of zinc (in fact probably zinc alloy) (**Figure 1.37**, top six rows), zinc and steel (**Figure 1.37**, bottom two rows & **Figure 1.38**, top & bottom) or steel only (**Figure 1.76**). Zinc eyelets are





non-magnetic, and steel eyelets magnetic. It is also possible to tell them apart from their differing lustre and corrosion products: dull and white in the case of zinc, shiny metallic or rusty in the case of steel. On the outside of the cap, the eyelet is domed with a hole in the middle, and is usually enamelled green (**Figures 1.15**, left, **1.37**, top left & **1.31**, bottom right) or tan (**Figure 1.37**, middle), or is of bare metal (**Figures 1.37**). (Steel eyelets were not originally enamelled, whereas most—if not necessarily all—zinc eyelets were). We also occasionally see eyelets of other colours, including olive tan (**Figure 1.47**), yellow tan (**Figure 1.32**, top) and grey (**Figure 1.38**, top). Enamel finishes can be distinguished from paint and other finishes by their glassy sheen and because they chip rather than scratch. On the inside of the cap, the inner tube of the eyelet, which is not enamelled, is riveted to a countersunk washer, either crimped or folded into it (**Figures 1.18**, bottom left & **1.37**, middle right), over it (**Figure 1.37**, middle left) or partially in and partially over it (**Figure 1.37**, top). In addition, washers occur back to front with the tube of the eyelet folded into them (**Figure 1.37**, middle right). The rivets of zinc eyelets are split into six or less petals; steel ones—usually—into eight or less. Presumably, therefore, these were scored or split prior to riveting. Generally, very early eyelets are zinc with green or—on occasions—olive tan enamel and later ones zinc with tan enamel or steel, or steel with a zinc washer, and no enamel. Green enamel finishes and zinc eyelets with steel washers are also seen on late caps but are not typical (**Table 1.8**; **Figure 1.18**, left, **Figure 1.38**, bottom & **1.75** upper middle left).

These types of ventilation eyelets are typical of those in caps obtained directly from veterans and we can be fairly confident that they are characteristic of the real thing. But unfortunately they are not the only ones out there. Broadly the remainder can be divided into three groups: those which are *untypical* of eyelets on army tropical peaked caps obtained from veterans but have a good provenance or which have close parallels in earlier SA kepis and

Figure 1.37

Ventilation eyelets in authentic caps. Rows 1–6: zinc. Top left: green enamelled and bare exterior eyelets with interior rivets folded partially in and partially over the washer in caps by Robert Lubstein. (The enamelled eyelet is shown after losing its enamel in **Figure 1.31**, top left). Top right: bare exterior eyelets and rivets folded partially in and partially over the washer in a Bergmann. Upper middle left: bare exterior eyelets and rivets folded over the washer in caps by Schlesische Mützenfabrik. Upper middle right: tan enamelled exterior eyelets and inside-out washers in a Valet. Lower middle left: tan enamelled exterior eyelets with rivets folded over the washer in a Kubach. Lower middle right: tan enamelled exterior eyelet with rivets folded into the washer in a Gebrüder Alm. All the zinc eyelets shown here without enamel exterior finishes have lost them. Rows 7–8: steel. Bottom left: bare steel exterior eyelets with rivets folded over (?) steel washers in caps by Ottmar Reich. Bottom right: bare steel exterior eyelets with rivets folded into zinc washers in a Mayser. The exterior surfaces of these steel eyelets were always bare. Scale: approximately 150%. *Photos: author; Barry Searson; Mark Vale; Virtual Grenadier; Marc Walker*

| Date | Manufacturer | Model | Qty of caps | Metal | | | | Finish | | | | Riveting | | | | | | |
|---------|---------------------|-----------|-------------|-------|--------------|--------|-------|--------|-------------|-------|-----------|----------|------------|------------|-----------|--------------|------------------------|-------------------|
| | | | | zinc | steel washer | eyelet | steel | eyelet | zinc washer | green | olive tan | tan | yellow tan | bare metal | folded in | folded- over | partly in/ partly over | washer inside-out |
| 1940 | Berlago | 1_OR | 4 | 4 | | | | | | 1 | | | | 3 | 2 | | | |
| | Halfar | 1_OR | 14 | 14 | | | | | | 4 | | | | 7 | 10 | | | |
| | Lago | 1_OR | 8 | 8 | | | | | | 4 | | 1? | | 3 | 2 | | 5 | |
| | Lubstein | 1_O, 1_OR | 10 | 9 | 1 | | | | | 5 | 1 | | | 4 | 1 | | 6 | |
| | SMF | 1_OR | 3 | 3 | | | | | | 1 | | | | 2 | | 3 | | |
| | Schebeler | 1_OR | 2 | 2 | | | | | | | 1 | | | 2 | 1 | | | |
| | Thomas | 1_OR | 2 | 2 | | | | | | 1 | 1 | | | | 1 | | | |
| 1941 | Bergmann | 1_OR | 4 | 4 | | | | | | 1 | | | | 3 | 1 | | 4 | |
| | Halfar | 1_OR | 5 | 5 | | | | | | | | 3 | | 2 | 5 | | | |
| | Lago | 1_OR | 5 | 5 | | | | | | 1 | 2 | | | 2 | 3 | | | |
| | Lubstein | 1_O, 1_OR | 33 | 33 | | | | | | 4 | | 18 | 4 | 1 | 5 | | 15 | |
| | Schebeler | 1_OR | 3 | 3 | | | | | | 6 | | 2 | | 1 | 2 | | | |
| | SMF | 1_OR | 20 | 20 | | | | | | | | 3 | | 10 | | 13 | | |
| | Sperb | 1_OR | 1 | 1 | | | | | | 1 | | 1? | | 4 | 5 | | | ?1 |
| 1941/42 | Thomas | 1_OR | 6 | 6 | | | | | | | | 6 | | | | | | |
| | Weissbach | 1_OR | 6 | 6 | | | | | | | | 6 | | | 4 | | | |
| | Greiling | 1_OR | 2 | 2 | | | | | | | | 2 | | | | | | |
| | Halfar | 1_OR | 6 | 6 | | | | | | 1 | | 4 | | | 6 | | | |
| | SMF | 1_OR | 16 | 15 | | 1 | | | | 2 | | 3 | | 8 | | | | |
| | Naubert | 1_OR | 1 | 1 | | | | | | | | 1 | | | | | | |
| | Valet | 1_OR | 9 | 9 | | | | | | | | 7 | | | 1 | | 4 | 2 |
| 1942 | Alm | 2_OR | 2 | 2 | | | | | | | | 2 | | | 2 | | | |
| | BMF | 2_OR | 1 | 1 | | | | | | | | 1 | | | 1 | | | |
| | Greiling | 2_OR | 2 | 2 | | | | | | | | 2 | | | 1 | | 1 | |
| | Kubach | 2_O | 1 | 1 | | | | | | | | 1 | | | | 1 | | |
| | Kurtze & Storckmann | 2_OR | 2 | 2 | | | | | | | | 2 | | | 1 | | 1 | |
| | LMD | 2_OR | 4 | 4 | | | | | | | | 3 | | | 2 | | 1 | |
| | MFD | 2_OR | 6 | 6 | | | | | | | | 5 | | 1 | | | 2 | |
| | Resolut | 2_OR | 1 | 1 | | | | | | | | | | | 1 | | | |
| | Halfar | 3_OR | 7 | 7 | | | | | 1 | | | 4 | | 2 | 4 | | 2 | |
| | Valet | 3_OR | 2 | 2 | | | | | | | | 2 | | | 1 | | 1 | |
| | BMF | 4_OR | 2 | 2 | | | | | | | | 2 | | | 2 | | 1 | |

Table 1.8

Ventilation eyelets in caps in the *Database*. Note the dates of introduction of tan and

| Date | Manufacturer | Model | Qty of caps | Metal | | | | | Finish | | | Riveting | | | | | | |
|---------------|------------------------|-----------|-------------|-------|-------------------|--------------|--------------|-------|--------|-----------|-----|------------|------------|-----------|-------------|------------------------|-------------------|---|
| | | | | zinc | zinc steel washer | steel eyelet | steel washer | steel | green | olive tan | tan | yellow tan | bare metal | folded in | folded over | partly in/ partly over | washer inside-out | |
| 1942 cont. | Grote | 4_OR | 1 | 1 | | | | | | | | | | | 1 | | | |
| | Bruno Kern | 4_OR | 1 | 1 | | | | | | | | | | | 1 | | | 1 |
| | Kubach 1942 & 1942/43 | 4_O, 4_OR | 5 | 5 | | | | | | | | | | | | 4 | | |
| | MFD | 4_OR | 4 | 4 | | | | | | | | | | | 2 | | | 3 |
| | Obenhack | 4_OR | 1 | 1 | | | | | | | | | | | 1 | 1 | | |
| | Resolut 1942 & 1942/43 | 4_OR | 6 | 6 | | | | | | | | | | | 6 | | | |
| | Teufel | 4_OR | 2 | | | 2 | | | | | | | | | 2 | | | |
| | Vorwerk & Sohn | 4_OR | 4 | 4 | | | | | | | | | | | 1 | 1 | 2 | |
| | Bruno Kern | 4_O | 7 | 7 | | | | | | | | | | | | | | 4 |
| | Greiling | 4_OR | 6 | 6 | | | | | 1 | | | | | | 1 | | 3 | |
| 1943 | Ernst Kern | 5_OR | 4 | 4 | | | | | | | | | | | 1 | 1 | 3 | |
| | BMF 0/0850/0387 | 4_OR | 5 | 2 | | | 3 | | | | | | | | 5 | | | |
| | Halfar 0/0250/0906 | 4_OR | 10 | 7 | | | | | | 1 | | | | | 5 | | 2 | 3 |
| | Häussler | 4_OR | 1 | 1 | | | | | | | | | | | 1 | | | |
| | Huber | 4_OR | 2 | 1 | | | | | 1 | | | | | | 2 | 2 | | |
| | Kubach | 4_OR | 3 | 1 | | | | | 2 | | | | | | 2 | | 3 | |
| | Mayser 0/0843/0012 | 4_OR | 9 | | 1 | | | | 6 | 1* | | | | | 8 | 9 | | |
| | Obenhack 0/0721/0074 | 4_OR | 1 | 1 | | | | | | | | | | | 1 | 1 | | |
| | Ottmar Reich | 4_OR | 7 | | | | | | 6 | | | | | | 7 | | 7 | |
| | Schellenberg | 4_OR | 2 | 2 | | | | | | | | | | | 2 | 2 | | |
| 1943 | Sprengfeil | 4_OR | 1 | 1 | | | | | | | | | | | 1 | 1 | | |
| | Straube | 4_OR | 5 | | | | | | | | | | | | 4 | 5 | | |
| | Valet | 4_OR | 1 | 1 | | | | | | | | | | | 1 | | | 1 |
| | Wolber & Plaff | 4_OR | 2 | 2 | | | | | | | | | | | 1 | 2 | | |
| | 0/0496/0340 | 4_OR | 9 | 9 | | | | | | 2 | 4 | 2 | | | | 9 | | |
| | 0/0520/0017 | 4_OR | 6 | 5 | | | | | | 1 | 2 | | | | 3 | 3 | | |
| | 0/0669/0036 | 4_OR | 2 | 2 | | | | | | | | 2 | | | 1 | 1 | | |
| | 0/0678/5015 | 4_OR | 4 | 2 | | | | | | | | 3 | | | 1 | 4 | | |
| | 0/0735/0022 | 4_OR | 3 | 1 | | | | | 1 | | | | | | 2 | 3 | | |
| | 0/0843/0008 | 4_OR | 5 | 5 | | | | | | | | | | | 5 | 3 | | 1 |
| 1943/44 | 1/1156/0018 | 4_OR | 2 | | | | | 1 | 1 | | | | | 2 | 2 | | | |
| | 0/0384/0066 | 4_OR | 3 | 3 | | | | | | 1 | | 1 | | | | | 3 | |
| 44 | 0/0678/5015 | 4_OR | 5 | 3 | | | | | | | | 2 | | 1 | 3 | | | |

steel eyelets. Rows shaded in buff include caps in which more than one eyelet trait occurs. Red cells are outliers or possible outliers. * = painted not enamelled

army Continental sidecaps, and in contemporary *Kriegsmarine* caps; those associated with reproductions (see Part 2); and otherwise authentic-looking eyelets, the rivets of which have been mangled. Related to the last group are those that survive only as holes having been accidentally lost or deliberately removed because they would give the cap away as a fake. The first group can be

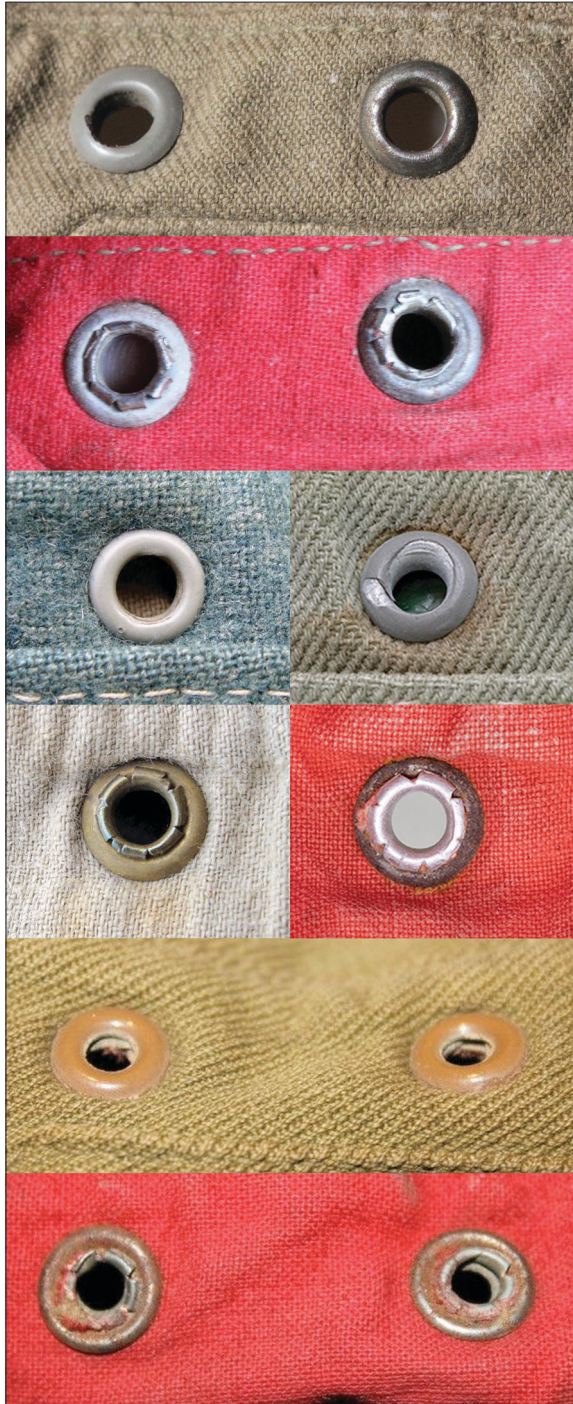


Figure 1.38

Non-standard authentic eyelets. Top: steel eyelets riveted into zinc washers in a non-standard 1942-dated model 1_OR Schlesische Mützenfabrik. Middle left: (?) brass-plated steel eyelet in an early Continental *Schiffchen*. Middle right: zinc eyelet riveted into a steel washer in a 1_O Lubstein (which has lost its manufacturer's stamp and is therefore undated). Bottom: zinc eyelets riveted into steel washers in a 1942-dated G. Teufel & Sohn. The top and bottom sets of eyelets are shaded in red in **Table 1.8**. Not to scale. Photos: eBay; Dal McGuirk; WAF

attributed to the exigencies of wartime manufacture and the variable chances of survival, but, owing to our incomplete knowledge of the Continental and other eyelets against which they are being compared, doubts continue to surround some of them. Authentic exceptions in the *Database* include two early model 1_OR caps by Lubstein, with unambiguous veteran provenances,

which have steel washers (**Figures 1.15**, right & **1.38**, middle right), and a set of steel eyelets in a 1942-dated cap by Schlesische Mützenfabrik (**Figure 1.38**), which are of the “wrong” metal for army tropical peaked caps of this date but similar to those in some contemporary *Kriegsmarine* caps (McGuirk 2014a). Also *possibly* authentic are a set of eyelets in steel with a brassy coating to the rivet (**Figure A3.2**), similar (but not identical) to eyelets seen on some early Continental sidecaps (e.g. **Figure 1.38**, middle). The second group can be dismissed out of hand. As for the last group, it has been suggested of some that they have been removed from less valuable sidecaps and inserted into fake peaked caps. (Sidecaps in which the original eyelets had apparently been replaced with modern ones were on sale in the US in the late 1980s/early 1990s: D. McGuirk pers. comm.). Another possibility is are that they are modern and have been crushed in order to disguise them or because the faker who fitted them did not have the tool necessary to do this correctly. The challenge here is to distinguish between period eyelets that were badly riveted in the factory, reused eyelets and mangled fakes. The few caps without eyelets or which have lost their eyelets have to be assessed using the other variables outlined in this essay.

Insignia application

Eagles and cockades were applied using different combinations of hand stitching, machine straight-lock stitch and machine zigzag-lock stitch (**Figure 1.39**). There are variations in both the width and the stitch angle of the zigzag-lock stitch (**Figures 1.22**, **1.39**, bottom & **1.42**). The eagle was applied upside down and back to front, then folded forward (“flipped” in collector parlance), or right-side up. When the former, the first line of stitching was usually machine straight-lock stitched, on some caps—and particularly those by Lubstein—the machine stitch continuing beyond the end of the eagle’s wing (e.g. **Figure 1.51**). The attachment of the flipped eagle was usually finished by hand. When the latter, it was either wholly hand stitched or zigzag-lock stitched. Factory applied soutaches seem always to have been machine straight-lock stitched. The principal variation in the application of these was whether their lower ends were cut into the false turn-up of the cap or folded between the base of this and the peak (**Figures 1.39**, top & bottom etc.). Also variable, are the positioning of the eagle between the top of the false turn-up and the top edge of cap (on Lagos, for example, it was usually atypically low: **Figures 1.7** & **1.46**), and, around the eagle and type CA cockades, the amount of unwoven backing cloth left exposed. Different manufacturers employed different combinations of these techniques (**Figure 1.39**). On caps by Berlago and Carl Halfar, for example, both eagle and cockade were zigzag-lock stitched (though the width of the stitch differed) (**Figures 1.22**, **1.42** & **1.45**), whereas on caps by Weissbach only the eagle was zigzag-lock stitched (**Figure 1.39**, bottom), and on caps by Ottmar Reich (**Figure 1.77** & **1.78**) and Schlesische Mützenfabrik (**Figures 1.39**, top & **1.53**), both were hand-sewn



whereas on some caps by Lago and on caps by Valet (**Figures 1.39**, upper middle, **1.46**, top right & **1.65**), only the eagle was hand-sewn. While these combinations were not always exclusive to particular manufacturers, in association with other traits they often are.

The reverse stitching of the insignia on most tropical caps is hidden beneath their linings. In the case of machine-sewn insignia, this shows that it was applied before the cap's final assembly. There are, however, a few apparently period examples of soutaches and cockades sewn *through* the lining (e.g. **Figures 1.40** & **1.79**), which must have been applied later. The soutaches are no doubt replacements; but the cockades seem more likely to be factory applications. For most caps with hand-sewn insignia, we do not know when the insignia was applied, but the *Database* includes one example of an eagle part stitched through the lining of the cap (an early Robert Lubstein) and examples

Figure 1.39

Insignia application. Top: hand-sewn eagle and cockade and "cut-in" soutache (probably a Schlesische Mützenfabrik). Upper middle: hand-sewn eagle and machine straight-lock stitched cockade (Alfred Valet). Lower middle: machine straight-lock stitched, flipped, and hand-sewn eagle, and machine straight-lock stitched cut-in cockade (Lago Berlin). Bottom: acute angled, machine zigzag-lock stitched eagle and machine straight-lock stitched cockade and folded-over soutache (F. Weissbach). *Photos: author's coll.; Larry Foley; Ratisbons; VirtualGrenadier*



Figure 1.40

1941-dated model 1_O cap by Robert Lubstein with a period “replaced” red, artillery soutache sewn through the lining of the cap. Four out of the six of the period replaced soutaches in the *Database* are red, suggesting that there was a shortfall in this particular colour (see also **Figure 1.9**, top right & **1.55**, top). This cap was the souvenir of POW camp guard in Canada. *Photos: Russell Militaria; VirtualGrenadier*

of hand stitched cockades both over and underlying the structural stitching of the cap (e.g. **Figures 1.16** & **1.59**) (cf. **Appendix 4**, 220–21), indicating that these were applied at different stages in the construction of the cap.



Figure 1.41

Eagle and cockade probably cut off a 0/0678/5015-numbered cap (cf. **Figure 1.80**), showing the stitching on the inside. *Photos: the Saleroom*

CATALOGUE OF INDIVIDUAL MANUFACTURER CHARACTERISTICS OVER TIME

In this section I describe the different sets of traits associated with unaltered caps by different manufacturers. These descriptions need to be prefaced with three caveats. Firstly, they are based on the caps in the *Database*, in some cases a handful per manufacturer only, and it is possible that exceptions exist of which I am unaware.

The more caps a manufacturer is represented by, the more likely the combinations described by me are to be representative of that manufacturer's caps, but they should not be treated as the only possible ones, and the authenticity of caps that do not conform should not be dismissed out of hand.

Secondly, the bulk of the *Database* has been drawn from publicly available and easily accessible sources. Anyone can access these, and that includes honest collectors wishing to restore a cap and wilful fakers. It should not therefore be assumed that every cap that conforms to one of my descriptions is necessarily authentic, or wholly authentic. Examine every cap in the round. Consider its manufacturing traits, yes, but also its patina and its wider context. What is its provenance? How easy would its authentic-looking traits be to copy? And so on.

Finally, these sets of traits are the result my juggling of a massive amount of data, and it is possible that I have dropped some of these and in so doing created some sets of traits—some fakes—of my own.

I have ordered caps by different manufacturers and of different models according to their first appearance in the record. This has the merit of separating out the earlier caps—the *Afrikamützen*—that were or could have been used in North Africa, from the later ones that were not, or probably were not, without drawing a hard and unprovable line between them.

1940–41

Berlago

Berlago made model 1_OR caps. Similarities between the stamps in, and some other features of, model 1_OR caps stamped “Berlago Berlin” and “Lago Berlin”, suggest that they were related, perhaps part of the same consortium (see p. 72, below). My gut feeling, based on the dates in the caps and the materials used in them, is that Lago succeeded Berlago, but there is not yet the evidence to prove this. They are separated here because of the difference in their stamps and the way in which their insignia are applied.

The *Database* includes four model 1_OR caps identified by me as Berlago's, two of which were modified for use by *Luftwaffe* troops (**Figure 1.42**, top

Figure 1.42

Berlago. Note in particular the insignia application, the type EA.4 eagle and the under-peak stitching. The deliberately bleached cap with the Panzer soutache was picked up outside Tobruk in December 1941 by a South African soldier (D. McGuirk pers. comm.). *Photos: Harry Cliffe; Mark Gibson; Dal McGuirk, WAF*



Berlago - Berlin
Jahr 1940 Größe 55





Figure 1.43

Model 1_OR caps by Carl Halfar. The combination of eagle and cockade applied using wide zigzag-lock stitch and soutache cut into the brow of the cap is uniquely diagnostic of caps by Carl Halfar.

Photos: author's coll.



left). The stamps on all of these caps are faded but where the dates are readable they date to 1940. There is no evidence that model 1_OR caps with the Berlago stamp were made after this date.

The distinguishing features of the Berlago as opposed to the Lago are the use of narrow zigzag-lock stitch to apply their eagles and cockades (NZL/NZL), their consistently early insignia, which include rare eagle type EA.4, the spacing of the lines on the underside of their peaks (2Nc) and their original colour, which appears always to have been olive green.

Otherwise they are very similar to other, early-dated Lagos with (usually) cut-in soutaches, a low placed eagle, an exterior shell of fabric type G, folded in-and-over eyelet rivets and readily fading interior stamps.

Carl Halfar

Carl Halfar made model 1_OR, model 3_OR and model 4_OR caps. The name was succeeded in 1943 by the number 0/0250/0906. At 32% of the total (14 caps), Carl Halfar is the most common make of tropical peaked cap in the *Database* for 1940 (35% of the ORs caps). The numbers for 1941 are significantly lower (6% of the total), and probably reflect a change in the number of tropical peaked caps produced by the company. (For 1942–43 caps see below).

Model 1_OR caps by Halfar are immediately recognizable, even in period photos (**Figures 1.10**, lower middle & **1.43**), from their unique combination of eagle and

cockade applied using wide zigzag-lock stitch (ZL/ZL) and a soutache cut into the brow of the cap. Also peculiar to the manufacturer is the use by it in 1941 and later of the stripy cotton gabardine fabric G.2 (**Figure 1.45**, bottom).

Carl Halfar

Berlin N 20

57

1940

Other cap traits characteristic of early Halfars but not necessarily exclusive to them are the use simultaneously of both fabric types RT.1 (**Figure 1.45**, top) and G (**Figure 1.44**), the former, a minority fabric for the manufacturer, and apparently out use by 1941; their uniformly green colour (**Figures 1.15**, left, **1.44** & **1.45**); the fitting of their eyelets, which tend to be widely-spaced and riveted tightly into the interior washer (**Figure 1.44**); the two lines of stitching on the underside of the peak, the configuration of which differs slightly from cap to cap (variants include 2Nc, 2a, 2b and 2c) (**Figures 1.15**, left & **1.44**); and its use of three quite different manufacturer stamps, one associated with 1940-dated caps, one with 1941-dated caps and one with 1940–43 dated caps (**Figure 1.5**, top, lower middle & upper middle).

Figure 1.44

1940-dated Carl Halfar (see also **Figures 1.26**, upper right & **1.36**, 2). Note the widely spaced eyelets and tightly folded in rivets. This cap was the souvenir of an Australian soldier.
Photos: Bob Lyons



**Figure 1.45**

1940- and 1941-dated caps by Carl Halfar. The 1940 cap (top & upper middle) is in fabric type RT.1, the 1941 caps (lower middle & bottom) in fabric G.2, which appears to have been exclusive to Halfar. Note the different eagles (EA.1 and EB.1) and cockades (CA and CC), and, in the lower cap, the officer upgrade. The faded cap was recovered from the Libyan desert after the war by British engineers clearing the battlefield. *Photos: Lee Greer; Dal McGuirk; Barry Searson*

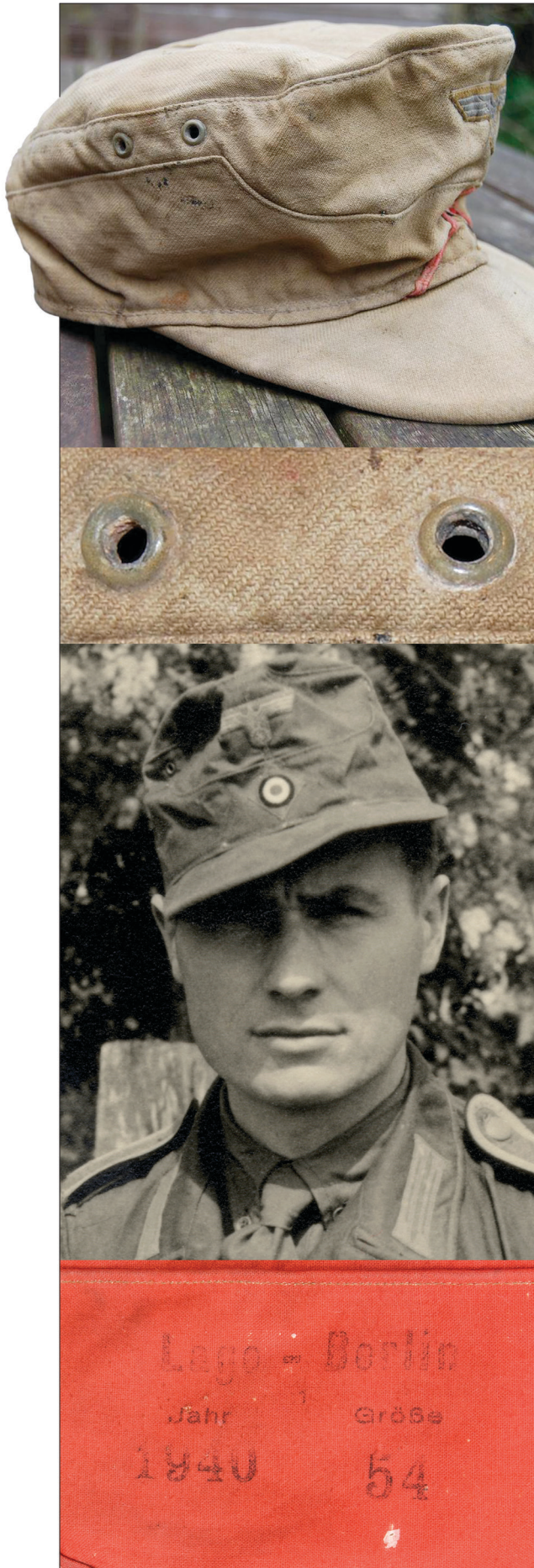
Lago Berlin

Lago Berlin made model 1_OR caps. The acronym Lago—for *Landes lief genossenschaft* (literally, country supply cooperative)—was employed by a consortium of small tailors (McGuirk 1987, 134). Its manufacturer stamps incorporate a variety of “workshop” numbers (1, 12, 15, 23) and the caps themselves display minor differences in the way

Figure 1.46

Pink soutached Lagos. The cap shown on the left and in the middle has lost its stamp but is certainly from 1940; that on the right—another Australian souvenir—is dated 1941. Typically for the date, the 1940 cap has a machine-sewn, flipped and hand-sewn eagle, a machine-sewn cockade and a cut-in soutache. It retains traces of green enamel on its eyelets (cf. inset left). The 1941 example has a hand-sewn eagle, machine-sewn cockade (1941 caps also have eagles and cockades applied in the same way as 1940 caps and hand-sewn cockades) and a folded-over soutache. Note the low positioning of the eagles on both caps, another feature characteristic of the consortium. *Photos: Bob Lyons; VirtualGrenadier*





their insignia were applied over time, the colour of the fabrics used for them and the configurations of their under-peak stitching (2Nc, 2a, 2b etc.), which may be attributable to these different workshops. The Berlagos described above may be another, more extreme example of this. Nonetheless caps by Lago Berlin, and particularly early caps by it, display a great deal of consistency in their traits of manufacturer and it is easy to distinguish them from caps by other manufacturers. In the *Database*, it is represented by 16 caps, nine of 1940 date, 5 of 1941 date and two of uncertain but also probably 1941 date.

All of the Lagos in the *Database* are in fabric type G, originally either of olive green (**Figure 1.46**) or buff (**Figure A2.3**). Most of the 1940-dated caps have machine straight-lock stitched, flipped and hand-sewn eagles, machine straight-lock stitched cockades (SL_F_HS/SL) and cut-in soutaches, a combination on caps in fabric type G that is unique to the consortium (**Figures 1.46**, top left & **1.47**, lower middle). The 1941-dated caps display a wider variety of methods of eagle and cockade application including machine straight-lock

Figure 1.47

Top & upper middle: 1941-dated Lago with a pink, folded-over soutache and rare olive-tan eyelets. Lower middle: earlier, but soutache removed Lago. Bottom: 1940 Lago manufacturer stamp (cf. **Figure 1.42**, top right). Photos: author's coll.; VirtualGrenadier; WAF

stitched, flipped and hand-sewn eagles and machine straight-lock stitched cockades (SL_F_HS/SL), hand-sewn eagles and machine straight-lock stitched cockades (HS/SL) and hand-sewn eagles and hand-sewn cockades (HS/HS), and have folded-over soutaches (**Figure 1.46**, left & **1.47**, top) (one 1940-dated cap only displays this latter feature). As on Berlagos, the positioning of the eagle is low, when compared to that on most other caps; while 11 out of the 13 for which there is evidence in the *Database* have or had pink soutaches (**Figures 1.26**, **1.39**, **1.46** & **1.47**). Other recurrent traits include the use of green and, apparently in buff coloured caps only, olive-tan eyelets (**Figure 1.47**, top & upper middle), and the ready fading of the manufacturer stamp.

Late Lagos are more difficult to distinguish from caps by other manufacturers than early ones, but using the combination of traits outlined above, it is still usually possible to identify them correctly. For example, a cap identified by Daniel Fisher as a Lubstein (Fisher 2011, 24) is here re-identified as a probable 1941-dated Lago because of the number of rows of stitching on the underside of the peak (two instead of one), their configuration, the fabric out of which the cap is made, the fading of its stamp, the soutache colour and the way and—in particular—where the insignia was applied.

Robert Lubstein

Robert Lubstein (Erel) made model 1_O (**Figures 1.15**, right, **1.40**, **1.49** etc.), model 1_OR (**Figures 1.48**,



Figure 1.48

Early model 1_OR caps by Robert Lubstein. In the upper photo, the eagle and cockade are hand-sewn, and in the lower machine-sewn, flipped and hand-sewn and machine-sewn. Both have early cockades and are in fabric type RT.1.

Photos: author's coll.





1.50 & 1.51) and probably General officers' (model 1_G) (see **Appendix 1**) tropical peaked caps. Though in production from 1940 to 1941 only, at 47 caps, Lubstein is the best represented manufacturer in the *Database*, comprising 29% of the total for 1940 (10 caps), and 39% for 1941 (33 caps) (15% and 22% of the ORs caps). It was the *only* manufacturer of the 1_O cap, which comprise 9% of the *Database* for 1940 (4 caps) and 24% for 1941 (20 caps).

ROBERT LUBSTEIN
BERLIN NO 55

56

Amongst caps with soutaches and without sweatbands, Lubsteins are the only ones that routinely have eagles that are machine-sewn using straight-lock stitch, flipped then hand-sewn, cockades that are machine-sewn using machine straight-lock stitch (SL_F_HS/SL), folded-over soutaches, and a single line of stitching on the underside of the peak (usually 1a or b) (**Figures 1.15**, right & **1.51**, upper & lower middle). Up to a point they can

Figure 1.49

Early model 1_O caps by Robert Lubstein. Top & lower middle: undated cap. Note the corroded aluminium wrapped officers' piping in the lower photo. Scale ½ inch (12.7mm). Upper middle: one of two different early (1940) Lubstein manufacturer stamps, which lacked dates. Bottom: colour photo showing the model 1_OR cap in use in early summer 1941. *Photos: Lee Greer; Dal McGuirk; unknown*



**Figure 1.51**

1941-dated caps by Robert Lubstein. Top: heavily faded model 1_OR cap in fabric type G. Middle: soutache removed model 1_OR cap in fabric type RT.1. Note the type CC cockade and—once again—the continuation of the machine stitching beyond the eagle's wing. Bottom: 1941 Lubstein manufacturer stamp. Note the date and the new font. *Photos: Lee Greer; Stuart Russell; VirtualGrenadier*

also be distinguished by their cut, which usually includes a relatively short peak and a relatively low false turn-up at the sides (**Figures 1.21 & A1.4–A1.5**, bottom). Other traits of note include the position of their eyelets, which are invariably set back from the start of the scallop in the false turn-up (**Figures 1.49–1.51**); the colour of these, which in early caps sometimes includes olive tan instead of green, and in later, tan caps, yellow tan instead of tan; and their interior riveting, which tends to be in-and-over the interior washer (**Figure 1.37**, top left; **Table 1.8**). Between 1940 and 1941, the most common fabric type used by Lubstein changed from RT.1 to G (**Table 1.6**).

ROBERT LUBSTEIN

BERLIN NO 55

1941

58

Notable deviations from these norms include the hand stitching of the eagle and cockade (HS/HS) on some early and—possibly—the earliest Lubsteins (**Figure 1.49**, top & middle); and on at least one of

these latter, two rows of stitching on the underside of the peak (**Figure 1.49**, lower middle). In addition, two officers' caps, one undated (**Figure 1.15**, right) and one with no surviving stamp but (?)early grey Continental eyelets, have steel eyelet washers.

Emil Schebeler
 gegr. 1870
Berlin NO 55
 Immanuelkirchstraße 6
 1941
58

Emil Schebeler

Emil Schebeler made model 1_OR caps. It is represented in the *Database* by six caps only, two with the Schebeler manufacturer stamp without a date, three dated 1941, and one with neither a manufacturer stamp nor a date, the identification of which is inferred from its traits of manufacturer. By analogy with undated Lubsteins (p. 12, above), the two undated caps have been dated to 1940, but it is *possible* that they have in fact lost 1941 date stamps, which on Schebelers were applied separately.

All of the Schebelers in the *Database* are in fabric type G, one undated example, in a faded brown colour (McGuirk 1987, 182: 48), the others—apparently—green or olive green. All have hand-sewn

Figure 1.52

Undated (top) and 1941-dated (middle & bottom) model 1_OR caps by Emil Schebeler. Note the type CB.1 cockade, the stitching at the base of the false turn-up, the eyelet riveting and the different eyelet colours.

Photos: David Bunch; Dal McGuirk





eagles and cockades and have or had cut-in soutaches. All have early eagles and two lines of stitching on the underside of the peak (2b). One of the undated caps has a type CB.1 cockade and an early olive tan eyelet (**Figure 1.52**, top); the other four have type CA cockades. All three 1941 dated caps have tan eyelets (**Figure 1.52**, upper middle).

Schebelers can be told apart from Schlesische Mützenfabrik caps, which like them have hand sewn eagles and cockades and cut-in soutaches, by the consistent use in them of fabric type G, the position of their eyelets, which are set back from the start of the scallop in the false turn-up (**Figure 1.52**, top), the interior riveting of these, in as opposed to over the washer (**Figure 1.52**, lower middle), and the stitching at the base of the false turn-up, which usually consists of two distinct over-sewn lines (**Figures 1.36**, M & **1.52**).

Schlesische Mützenfabrik

Schlesische Mützenfabrik made model 1_OR caps under this name from 1940 to 1942. After Lubstein, it is the best represented manufacturer in the *Database* (45 caps), comprising 7% of the total for 1940 (3 caps) and 25% for 1941 (21 caps) (7% and 35%—the majority—of the OR caps for these dates). (For 1942 caps see below). Caps by Schlesische Mützenfabrik are known by some collectors as Frankensteins, after their place of manufacturer (Frankenstein in Silesia, now Żabkowice Śląskie).

Caps by Schlesische Mützenfabrik are known for their high fronts, their insignia application—hand-sewn eagle and cockade (HS/HS) and cut-in soutache (**Figures 1.39**, top & **1.53**, top)—and the riveting of their eyelets over their interior washers (**Figure 1.9**, lower middle right & **1.53**). 1940-dated caps occur in fabric type G and 1941-dated caps fabric types G and RT.1, with the later by far the most common (**Table 6**). Caps in both, but particularly fabric G, occur bleached, but where they retain their colour, most were originally green (**Figures 1.53**). A single cap in fabric G, however, with a green crown and a buff underside to the peak, suggests the possibility that some of the bleached caps in fabric G may also originally have been buff. The eyelets on Schlesišches are set relatively far forward in relation to the start of the scallop in the false turn-up (**Figure 1.53**) and all have two rows of stitching on the underside of the peak (usually 2b but occasionally 2a or 2Wb).

A single 1941-dated cap in the *Database* deviates from the norm in having a what looks like a soutache that is folded over the bottom of the false turn-up instead of cut into it. The relationship of the cap's structural stitching to this, under and over it, suggest that this was a factory, rather than a field or

Figure 1.53

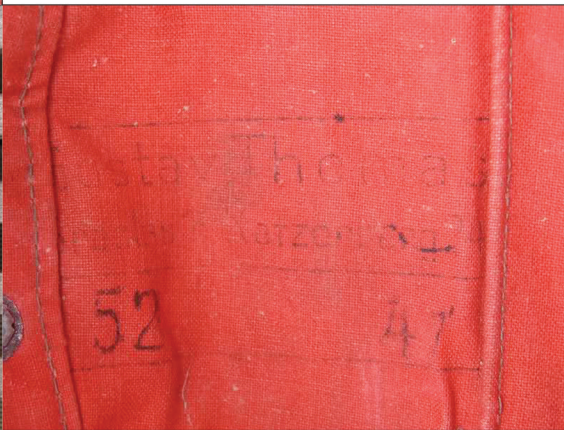
1940 (top left) and 1941-dated model 1_OR caps by Schlesische Mützenfabrik (top right & middle) and Schlesische Mützenfabrik manufacturer stamps (bottom). Note the insignia application, the fabric types (G and RT.1), the position of the eyelets and the eyelet riveting. The meaning of the stamp logo is unknown. Photos: Alan Culhane/Dal McGuirk; Lee Greer; Bene Merenti Auktionen; Dal McGuirk; Thoms (AKF)



depot replacement. The soutache is red, the most frequent replacement colour amongst caps with replaced soutaches in the *Database* (cf. **Figures 1.40 & 1.55**, top), and it is suggested that this modification was the company's response to a shortfall encountered in the field.

Gustav Thomas

Gustav Thomas made model 1_OR caps between 1940 and 1941 (**Figures 1.21**, left, **1.54 & A2.1**). The *Database* includes 11 caps by this manufacturer, including two with 1940 date stamps and six with 1941



date stamps. Caps by Thomas are usually in fabric type G; their eagles are applied using machine straight-lock stitch, flipped then hand-sewn, and their cockades using machine straight-lock stitch (SL_F_HS/SL) (**Figure 1.54**). Their soutaches are folded between the base of the false turn-up and the peak of the cap (**Figures 1.54 & A2.1**). Caps by Thomas can be distinguished from those by other manufacturers that



Figure 1.54

1940 (top) and 1941 model 1_OR caps by Gustav Thomas. *Photos: Dal McGuirk; Frédéric Ruelle*

display these characteristics, such as Lubsteins and Bergmanns, by the sides of their false turn-ups, which are relatively high (**Figure 1.21**), the position of their eyelets, which are often—though not always—relatively far forward, the interior riveting of these, in as opposed to in-and-over the washer (**Figure 1.54**) and on 1941-dated examples—and uniquely on model 1_OR caps—two very widely-spaced rows of stitching on the undersides of their peaks (2Wa) (**Figures 1.54 & A2.1**). Caps by Thomas also have relatively long peaks (**Figure 1.21**).

Gustav Thomas
Breslau 1, Ketzerberg 24
52 41

Perhaps significantly, the two 1940-dated caps in the *Database* (**Figure 1.54**, top; Kurtz 2004, 140), have more closely-spaced lines on the underside of the peak (2Wb).

Erich Bergmann

Bergmann made 1_OR caps (**Figure 1.55**). There are four of these in the *Database*, of which three retain 1941 date stamps. A fifth—rather

Figure 1.55

Two faded model 1_OR caps by Erich Bergmann, the upper with a (?) period replaced artillery soutache. Very similar to the Thomas (opposite), caps by Bergmann can usually be distinguished from these by the position and riveting of their eyelets and the configuration of their under-peak stitching. (For the eyelets of the upper cap, see **Figure 1.37**, top right).
Photos: David Bunch; VirtualGrenadier



different example—came to light too late to be included in the *Database* or the tables based on it, but is included here.

The four in the *Database* are in fabric type G, three very heavily faded and three green or originally green. The proportion of faded caps suggests that they were prone to fading. Their eagles were machine straight-lock stitched, flipped then hand-sewn; their cockades machine straight-lock stitched (SL_F_HS/SL). Their soutaches are or were folded between the base of the false turn-up and the peak of the cap. Their false turn-ups are relatively high at the sides—like those on caps by Thomas—but their eyelets tend to be closer together, set further back from the edge of the scallop and riveted in-and-over the interior washer, rather than tightly into it. The under-peak stitching on all four is identical, comprising two intermediate to widely-spaced lines set slightly further from the edge of the peak than the space between the lines (2c–2Wb).

Erich Bergmann
Ebersdorf
1941 58

The other cap, which is also dated 1941, is similar but is in a dark buff variant of fabric type IT, sports a type EC.4 eagle, a variant usually associated with later caps, and has unusual brown enamelled eyelets. Also sporting the Bergmann stamp is a cap in fabric RT.1 without eyelets (see **Appendix 3**). Possibly, therefore, caps by this manufacturer, though usually in fabric type G, occur in other fabrics as well. Bergmanns are not known certainly to have seen service in North Africa.

Jacob Sperb

Jacob Sperb is represented in the *Database* by a single, officer-modified model 1_OR cap, which was acquired by a New Zealand soldier in Cyrenaica in late 1941 (**Figure 1.56**; D. McGuirk pers. comm.). The cap has a clear manufacturer stamp but no date. On analogy with the undated 1940 caps by Lubstein, Schebeler and Schlesische Mützenfabrik described above, it has been dated to 1940 (Kurtz 2004, 122). This date is disputed, however, because the cap's place of manufacture—Regensburg—falls outside the Berlin/ Silesia area, in which all other identified early manufacturers of WW2 German tropical uniforms were located (McGuirk 2014b), because of its tan eyelets, a trait exclusively associated with post-1940 caps (**Table 1.8**), and because of its cockade, which is of type CB.1, a variant occasionally seen on 1940-dated caps but common on 1941-dated caps (**Tables 1.5**). It is in a sage green variant of fabric type RT.1. Its eagle was machine-sewn using straight-lock stitch, flipped then hand-sewn, its cockade machine-sewn using machine straight-lock stitch (SL_F_HS/SL), and its soutache cut-in. Its tan eyelets, the interior washers of which are fitted inside-out, are set back from the scallop in the false turn-up;

**Figure 1.56**

Officer-modified model 1_OR cap by Jacob Sperb, the only known example of a German army tropical peaked cap by this manufacturer. Note the form and the width of the secondary officers' braid.

Photos: David Bunch

and it has a single line of stitching on the underside of the peak, set well in from the edge of this (1c).

F. Weissbach

Felix Weissbach made model 1_OR caps (**Figures 1.39**, bottom & **1.57**). There are six in the *Database* of which four retain 1941 date stamps. Weissbachs have depot stamps ("E" for Erfurt), are fashioned from fabric type RT.3—sometimes with a distinct stripe in it—and used eagle type EB.2 and cockade type CD.2, the only occurrences of these features in the *Database* for 1941 (**Tables 1.4–1.6**). It is assumed therefore that these caps belong to the end of that year. A photo of German POWs in captured in Tunisia shows a probable Weissbach being worn.

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**F. Weissbach
Glauchau
E.41.**

Weissbach eagles were applied using zigzag-lock stitch, often acutely angled, and their cockades using straight-lock stitch (ZL/SL or AZL/SL), an unusual combination paralleled in caps by one other confirmed manufacturer only (Ritter or number 0/0678/5015). They had folded-over soutaches and two lines of stitching on the underside



Figure 1.57

A model 1_OR cap by F. Weissbach. Note the unusual acute-angled zigzag-lock stitch used to apply the eagle and the long stitch length used for the construction of the rest of the cap. Photos: VirtualGrenadier



of the peak set well back from the edge (2c or 2d). Compared to other 1941-dated caps they also have a low profile (not discernible in **Figure 1.57**) and they are notable for their stitch length, which is longer than that used for most caps.

A well-known cap displaying many of the foregoing traits is stamped with the name "Johann Vogl" (Figueroa 1996, 8; cf. **Figure 1.80**, bottom left). This cap has a hand-sewn eagle untypical of Weissbach and for this reason perhaps, Vogl, a theatrical costumier (Kostümverleih Johann Vogl), has entered the record as a manufacturer of the WW2 German army tropical peaked cap (O'Keefe 2010). It is my view that the cap is a Weissbach, and the hand-sewn eagle an incorrect reapplication, and in the *Database* I have grouped it with these.

1942 (1_OR, 2_O and 2_OR caps)

Gebrüder Alm

Alm made model 2_OR caps, of which there are two in the *Database*, and—possibly—model 1_OR caps. Both of the 2_OR caps retain traces of 1942 date stamps (**Figures 1.8**, lower middle & **1.58**). Like other model 2_OR caps, these *could* have seen service in North Africa, but there is currently no unambiguous evidence that they were.

One of the two caps in the *Database* is in fabric type RT.2 and the other in fabric type RT.2 and (on the underside of the peak only) a variant of fabric G. Both are green (**Figure 1.31**, bottom left).

They have type EB.1 eagles and CC cockades. One eagle is applied using narrow zigzag-lock stitch and the other by hand, and one cockade using machine straight-lock stitch and the other using narrow zigzag-lock stitch (NZL/SL and HS/NZL) (**Figures 1.23**, bottom, **1.26**, lower middle right & **1.58**)—in both cases apparently original to the cap (cf. **Figure A4.3**, left). Their soutaches, the ends of which survive behind the caps' sweatbands (**Figures 1.33**, top & **1.58**, lower middle), were folded between the brow of the cap and the peak. They have two closely to widely-spaced lines of stitching above the peak (2C–2W), which do not overlie the cockade, and on the undersides of the peak, a single line of stitching set well in from the edge (1c). Their sweatbands are made from green ribbed twill and buff leatherette (**Figures 1.33**) and their red linings, when compared to those in other tropical peaked caps, relatively soft.

The model 1_OR cap is also dated 1942 and is similar to these model 2_OR caps but it is wholly in a tufty variant of fabric type G, has an aberrant eyelet and an additional line of stitching on the underside of the peak. For these reasons, I am uncomfortable with it (**Appendix 3**). But with only two other caps against which to compare it, it would be unwise to rule it out of consideration.

Figure 1.58

Soutache removed model 2_OR cap by Gebrüder Alm acquired in Tunisia by a US serviceman during or after March 1943. *Photos: Jeffrey Slaker*



**Figure 1.59**

Bayerische Mützen-Fabrik. Top & middle: soutache removed model 2_OR cap. Note the Italian fasces applied unofficially to the side. Bottom: the stamps in 1942-dated caps by Bayerische Mützen-Fabrik differ from the company's later stamps. *Photos: Lux Military Antiques; Mark Twiname; Virtual Grenadier*

Bayerische Mützen-Fabrik

In 1942 Bayerische Mützen-Fabrik made model 2_O and 4_OR caps, of which the latter definitely saw service in North Africa (see below). There is one model 2_OR in the *Database* (**Figure 1.59**). It is in fabric type IT and has a hand-sewn *or*—more probably—a machine straight-lock stitched, flipped then hand-sewn eagle, and a hand-sewn cockade (HS or SL_F_HS/HS). Its soutache, which has been removed, was folded between the brow of the cap and the peak. Above the peak it has two intermediately-spaced lines of stitching (2CS–2WS), both of which overlie its cockade, and it has two intermediately-spaced lines of stitching on the underside of the peak (2b). The sweatband is of buff plain weave, and the eyelets are of zinc, and folded into the interior washer. Apart from the use of fabric type IT and the possible machine stitching of its eagle, these features are paralleled on the 1942-dated model 4_ORs by the manufacturer. Similar stitching of the eagle is seen in a 1943-dated model 4_OR cap.

Greiling

Greiling did not date stamp its caps and it is not possible to date them precisely. Greiling made model

1_OR, 2_OR and 4_OR caps. The earliest should be its model 1_OR, of which there are two in the *Database* (Kurtz 2004, 142; McGuirk 1987, pl. 32, left). These can be placed somewhere around the end of 1941 or the beginning of 1942 on the basis of their fabric (RT.3) and the use on one of them of cockade type CD.1, which is associated primarily with post-1941 caps (**Tables 1.5 & 1.6**). The model 2_OR cap, like all other model 2_OR caps, belongs to 1942. There are also two of these in the *Database*, one of which was acquired by a New Zealand soldier at Wadi Akarit, Tunisia, in April 1943 (**Figures 1.60**; Borg & Twiname 2010, 29).

Greiling & Co.
Felina Frankfurt
 Frankfurt a. M.

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Apart from having sweatbands, model 2_OR caps by Greiling are much the same as model 1_OR caps by the manufacturer. The principal diagnostic feature of both is their insignia application. On all Greilings, and no other make of German army tropical *peaked* cap, the eagle is machine-sewn using straight-lock stitch, flipped, then finished using machine straight-lock stitch, and the cockade machine-sewn using straight-lock stitch (SL_F_SL/SL) (**Figures 1.60 & 1.66**). The soutache was folded between the base of the brow and the peak (**Figure 2.42**, left).

Figure 1.60

Soutache removed model 2_OR cap by Greiling. The method of straight-lock stitch used to apply the eagle is unique to tropical peaked caps by Greiling.
Photo: Dal McGuirk



Other recurrent features of caps by Greiling are a single line of stitching on the underside of the peak, usually set well back from its edge (1c–1d), a sweatband comprising green twill and buff leatherette, reinforced by a strip of thin black material (exceptionally, the cap shown has a sweatband of buff

twill and brown leatherette), the tendency of the manufacturer stamp to fade, and the occasional use of rare eagle type EA.4, which occurs on caps by one other manufacturer only (**Table 1.4**), and its exclusive use of cockade type CD.1. Caps occur in fabric types G and RT.3. Model 2_ORs (and 4_ORs) have two widely-spaced lines of stitching above the peak (2W), the upper of which sometimes but does not always overlie the cockade, and their eyelet riveting is usually in-and-over their interior washers.

Carl Halfar

In 1942, Carl Halfar made model 1_OR and model 3_OR caps. There are six 1_ORs of this date in *Database*, 16% of the 1_ORs for that year, slightly more than double the percentage of 1_ORs in the *Database* for the previous year.



Figure 1.61

Mint 1942-dated model 1_OR cap by Carl Halfar. Important distinguishing features include its sloppy construction and the green thread used to apply its insignia.

Photos: VirtualGrenadier

There are similarities and differences, albeit slight, between model 1_OR caps made by Carl Halfar in 1940 and 1941 (**Figures 1.44–1.45**), and model 1_OR caps made by Carl Halfar in 1942 (**Figure 1.61**). The similarities include the continuing use of the stripy fabric, G.2, and the way their insignia were applied; the differences, the application of new insignia variants (eagle types EC.1 and ED.1 and cockade type CD.2), the recurrent use of green thread to apply the eagle and cockade (which continues into 1943), the disappearance of manufacturer stamps without frames (**Figure 1.5**), and a certain sloppiness in their manufacturer (cf. Schlesische Mützenfabrik, below), seen in the application of the soutache, the ends of which are often asymmetrical (**Figure 1.61**), and an inconsistent placing of the eyelets.

Karl Kubach

1942-dated Karl Kubachs in the *Database* include a possible model 1_OR, a model 2_O (**Figure 1.62**), two model 4_Os and an officer modified model

4_OR. A third 4_O probably also belongs to this date (**Figure 1.67**). Only Kubach made the model 2_O cap. No caps by Kubach are *known* definitely to have been brought back from North Africa but photos showing them being worn by *Afrikakorps* officers in Tunisia are reported.

Kubachs tend to be in fabric G but there are exceptions. Their eagles were machine straight-lock stitched, flipped then hand-sewn; and their cockades machine straight-lock stitched (SL_F_HS/SL). Soutaches were folded between the base of the false turn-up and the peak of the cap. They have a single line of stitching on the underside of the peak set well back from the edge (1d) (the 1_OR referred to above is an exception in this respect); and their eyelets, which are set well back from the start of the scallop in the false turn-up, are riveted over the interior washer like those in caps by Schlesische Mützenfabrik. Irrespective of date or model, this combination of insignia application, under-peak stitching and eyelet riveting is exclusively diagnostic of army tropical peaked caps by Kubach.

Other features of note include two widely-spaced lines of stitching above the peak, the profile of the cap, which is similar to that of



Figure 1.62

Soutache removed model 2_O cap by Karl Kubach. Note the insignia application, the under-peak stitching and the eyelet riveting. *Photos: David Bunch*

earlier caps by Lubstein, from whom Kubach took over the manufacture of officers' caps, and their sweatbands, which, in the single model 2_O cap in the *Database*, consists of brown leatherette and light green twill (**Figure 1.62**), but in all the other Kubachs with visible sweatbands, green twill and buff leatherette (**Figure 1.67**).

Kurtze & Storckmann

Kurtze & Storckmann made model 2_OR caps (**Figure 1.16**) of which there are two in the *Database*, one of which one was acquired by a New Zealand soldier at El Alamein in November 1942 (Borg & Twiname 2010, 30, bottom left; McGuirk 1987, pl. 36, right; D. McGuirk pers. comm.). This cap is dated April 1942 (442).

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Kurtze & Storckmann

K.G. BERLIN C2

442

Caps by Kurtze & Storckmann can be distinguished from other model 2_OR caps in the *Database* by the relationship of their cockades to the structural stitching of the cap, which—uniquely—they overlie, and their undyed cotton plain weave and grey-buff leatherette sweatbands. Also unique is the lining fabric of the El Alamein cap, which is of coarse red satin weave, instead of the usual red plain weave.

The caps in the *Database* are in fabric type RT.2 and have type CC cockades. Their eagles and cockades are hand-sewn (HS/HS) and their soutaches, which underlie the caps' structural stitching, are folded between the brow of the cap and the peak. They have two lines of stitching above the peak (2W) and two lines of stitching on the underside of the peak (2b–2Wb). Their eyelets are riveted in-and-over their interior washers.

Lago Mitteldeutschland

Landes Lief Genossenschaft Mitteldeutschland (usually abbreviated to Lago Mitteldeutschland) also made model 2_OR caps. There are four in the *Database*, including one with a February 1942 date stamp (242). Like caps by Lago Berlin, the Lago Mitteldeutschland manufacturer stamp incorporates a “workshop” number and the caps themselves display minor differences, most notably in their fabrics, under-peak stitching and eyelet riveting, which may be attributable to these different “workshops”. Unlike the numbers in Lago Berlins in the *Database*, which overlap with those seen in tropical *Schiffchen* by the Berlin consortium, the numbers in Lago Mitteldeutschlands in the *Database* do not overlap with those in tropical *Schiffchen* by Lago Mitteldeutschland. This perhaps indicates a different cooperative strategy to that of Lago Berlin.

Figure 1.63

2_OR cap by Lago Mitteldeutschland. This cap is from workshop "4". Photos: *The Treasure Bunker*

Once again there is no certain evidence that they were worn in North Africa but the early 1942 date on one, and the survival of soutaches on two others in the *Database*, suggests they most likely were.

Caps by Lago Mitteldeutschland (**Figure 1.63**) occur in fabrics RT.2 and RT.3. Their eagles and cockades are hand-sewn (HS/HS) and their soutaches are folded between the brow of the cap and the peak. They have two widely-spaced lines of stitching above the peak (2W), the upper of which overlies the cockade, and two variably-spaced lines of stitching on its underside (2Na and 2b–2c on caps in the *Database*).

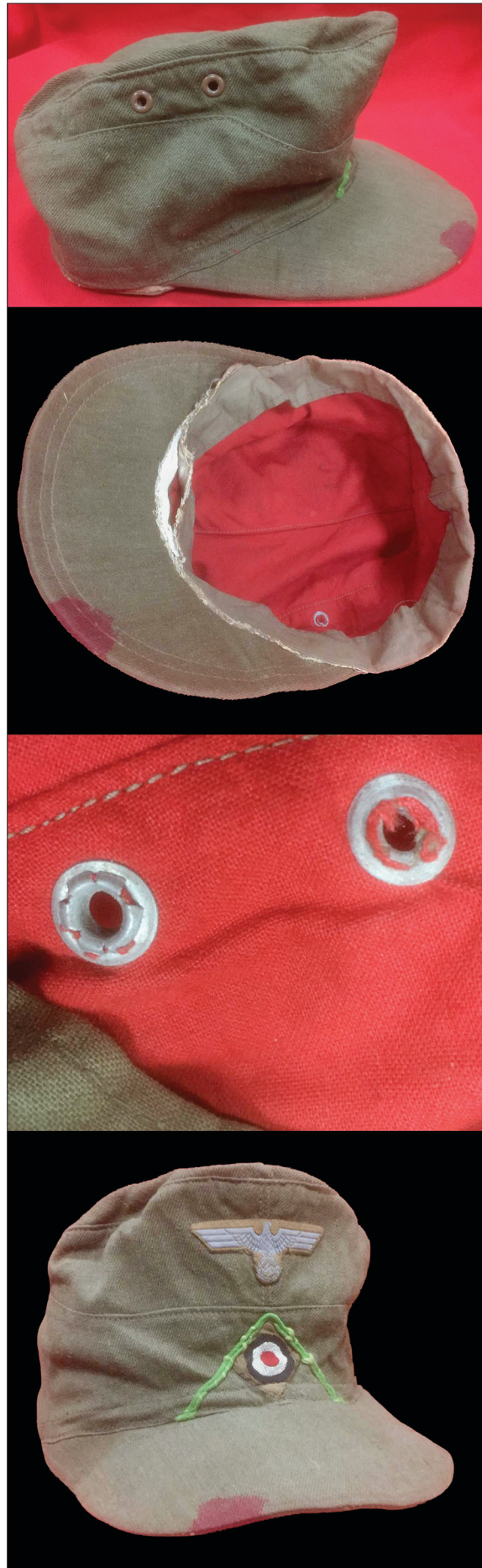
56

Landes · Lief · Genossenschaft
Kürschner und Mützenmacher
Mitteldeutschland **4**

They can be distinguished from model 2_OR caps by Bayer. Mützen-Fabrik and Kurtze & Storckmann, who applied their insignia in similar ways, by the relationship of the upper line of stitching above the peak to the cockade, and their sweatbands, which are made from buff leatherette and green plain weave.

Mützen-Fabrik Dreßen

The *Database* includes ten caps by Mützen-Fabrik Dreßen, six model



2_ORs and three model 4_ORs (and one whose model is uncertain), all of which are dated, or can be dated to 1942. Most of these appear to be in a variant of fabric type G (G.3). Their eagles and cockades are applied using wide or narrow machine zigzag-lock stitch (ZL/ZL or NZL/NZL), the soutache, where applied, was folded between the brow of the cap and the peak, and they had two widely-spaced lines of stitching above the peak (2W), the upper of which overlies the cockade, and usually two widely-spaced lines of stitching on the underside of the peak (2Wb) (Figuerola 1996, 11; Kurtz 2004, 139, 141 & 144). Sweatbands are mostly of tan leatherette and green twill, though there is at least one exception to this rule (Figuerola 1996, 12). Their eyelets tend to be located quite far forward and usually the interior washer is placed inside-out. Peculiarly diagnostic features of model 2_ORs by the manufacturer, include: the frequent use of cockade type CA, a rare type by 1942; the combination of machine zigzag-lock stitch to apply the eagle and cockade; the widely-spaced lines of stitching above the peak; and the aforementioned eyelet fitting.

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**Mützen-Fabrik
Dreßen
Rheyd.**

Karl Naubert

Karl Naubert is represented in the *Database* by just one photo of a mint, apparently 1942-dated cap attributed to “an Erfurt maker”, which is shown in Robert Kurtz’s *Afrikakorps* (2004, 142–43). That this cap is in fact a Naubert is my inference and has not been confirmed independently. The cap appears to be a model 1_OR. It is in a stripy variant of fabric type RT.3, similar to that used by Weissbach. Its eagle was applied using machine straight-lock stitch, flipped, then hand-sewn, and its cockade using machine straight-lock stitch (SL_F_HS/HS). Its soutache is folded between the brow of the cap and the peak.

Resolut

The rarest manufacturer of model 2_OR caps in the *Database*, Resolut is represented by a single cap only. Apart from the soutache, this cap is very like the more common model 4_OR cap by the manufacturer (**Figure 1.70**). It is in fabric type G. Its eagle is machine-sewn, flipped then hand-sewn and its cockade narrow machine zigzag-lock stitched (SL_F_HS/NZL), a method of insignia application, which amongst model 2_OR caps is unique to Resolut. (It is not clear whether the eagles on the model 4_ORs are hand sewn then flipped or machine sewn then flipped, but on the single model 2_OR, the method used to apply the eagle is unambiguous). The soutache is folded between the brow of the cap and the peak. It has two closely-spaced lines of stitching above the peak (2C) and—a recurrent and highly diagnostic feature

of Resoluts of all models—two widely but irregularly-spaced lines of stitching on the underside of the peak (2Wb). The sweatbands of all Resoluts seem to be of buff leatherette and green twill. Their eyelets are riveted into, as opposed to over, the interior washer. The 2_OR cap, like all other 2_OR caps, could have been worn in North Africa, and Resoluts are widely believed to have seen service there, but I know of none that can be unambiguously provenanced to that theatre.

Resolut F42. 56

Schlesische Mützenfabrik

Schlesische Mützenfabrik made over 50% of the model 1_OR caps in the *Database* for 1942 and at 23% of the total (19 caps) is the best represented manufacturer overall.

Two changes only distinguish 1942-dated Schlesische Mützenfabriks from those made in 1940 and 1941. Firstly, more than half of 1942 caps are in fabric type IT (**Figure 1.64**, top right, middle left & bottom left), a fabric that—with one exception (see Bergmann, above)—was not used for the tropical peaked cap prior to this date. The peculiar popularity of caps by Schlesische Mützenfabrik can be attributed to the adoption of this fabric, which was originally buff (**Figure 1.64**, middle left), and probably faded more readily than fabrics RT.2 and RT.3, which were becoming more common at this time. Secondly, the stitching immediately above the peak, which previously comprised a single over-sewn line (SO) (**Figure 1.53**, top), was in many caps replaced a series of sloppy-looking, wavy lines (MWPO) (**Figures 1.36**, middle & **1.64**; cf. **Figure 1.53**).

Two 1942-dated caps in the *Database* deviate from this norm. One has steel eyelets (**Figure 1.38**, top), an atypically a low profile for a Schlesische Mützenfabrik and had a folded-over, instead of the usual cut-in soutache. It is postulated that the final assembly of this cap were out-sourced to a different company (McGuirk 2014a). The other (**Figure A3.4**) is very like a standard late Schlesische Mützenfabrik but its eyelet colour is atypical and, unusually, its eyelet rivets, which are of the normal zinc, are folded-in rather than folded-over its interior washers.

Alfred Valet

Valet made model 1_OR, model 3_OR and model 4_OR caps. Where the date stamp survives, all the model 1_ORs are dated 1942 (**Figure 1.6**, upper middle). There are 10 model 1_OR caps by Valet in the *Database* (27%), which—after Schlesische Mützenfabrik—makes it the principal manufacturer of the model in 1942. Very few worn model 1_ORs by Valet retain their original soutaches and I suggest that most were issued after the July 1942 order to remove these and that their soutaches were removed at issue. Model 1_OR caps by Valet are known to have been acquired in Tunisia, but not earlier in



Figure 1.64

1942-dated caps by Schlesische Mützenfabrik in fabric types RT.1 (top left) and IT. The cap above was acquired during the second battle of Alamein. Photos: AKF; author's coll.; Lee Greer; Mark Vale; VirtualGrenadier

the North African campaign (**Table 1.3**). The combination of these three things suggests that they were issued to the new troops deployed for the defence of Tunisia, not to the *Afrikakorps*—an indicator of and evidence for the lag between cap manufacture and issue.

Alfred Valet

Mützenfabrik

Stuttgart–Bad Cannstatt

1942

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Caps by Valet are easy to spot because of the combination in them of fabric type RT.2 (at least eight of the 12 1942-dated caps in the *Database*) (**Figure 1.65**, middle), of hand-sewn eagles and machine-sewn cockades (HS/SL) (all the Valets in the *Database*) (**Figures 1.39**, upper middle & **1.65**, top) and of two very closely-spaced lines of stitching on the underside of the peak (2Nd) (also all of the Valets in the *Database*) (**Figure 1.65**, lower middle).

Other characteristics of the manufacturer include the folding of the soutache between the base of the brow and the peak of the cap and the frequent application of the interior washer inside-out (a trait regularly associated with caps by only three other manufacturers: **Table 1.8**) (**Figure 1.37**, upper middle right). They are also said to

Figure 1.65

Model 1_OR caps by Alfred Valet. Features of note include the insignia application (HS/SL), the fabric (type RT.2), the inside-out-washer and the under-peak stitching (2Nd). *Photos: Carey Sayre; Barry Searson*



be weak where the peak joins the brow of the cap.

1942 (3_OR, 4_O and 4_OR caps)

Bayerische Mützen-Fabrik

1942-dated model 4_OR caps by Bayerische Mützen-Fabrik in the *Database* (2 only) are similar to the model 2_OR described above except for their fabrics (types RT.2 and RT.3), their unambiguously hand-sewn eagles, and in one, the under peak stitching, which is more closely spaced (2Nb–2b), and the manufacturer stamp, which differs from those shown here (**Figures 1.59 & 1.73**). The latter was acquired by a New Zealand soldier at the end of Tunisian campaign (D. McGuirk pers. comm.).

Georg Grote

Grote is represented by a single 1942-dated model 4_OR cap from which the insignia has been stripped. It is in fabric type RT.3, has two closely to widely-spaced lines of stitching above the peak (2CS–2WS) and two very closely-spaced lines of stitching on the underside of the peak (2Nd). The sweatband is of buff leatherette and (light) green plain weave.

Greiling

There are six model 4_OR caps in the *Database* (**Figure 1.66**), of which



Figure 1.66

Model 4_OR cap by Greiling. Note the way the eagle is attached and the black stiffener/ backing cloth in the sweatband. *Photos: Italian War Front (inset); Bob Lyons*

one is known to have been brought back from Tunisia by a New Zealand soldier (D. McGuirk pers. comm.) and another from Italy by a US soldier (G. Spadaro nd.). At the earliest, they date to the second half of 1942. Whether or not they were produced after this date is unknown.

Except that they were manufactured without soutaches, model 4_OR caps by Greiling differ little from model 2_OR caps by the same manufacturer (see pp. 88–90), and like them, their key identifying feature is the way their insignia are applied (SL_F_SL/SL).

Carl Halfar

Model 3_OR caps by Carl Halfar (**Figure 1.17**) are more or less identical to later model 1_OR caps by the manufacturer, except for the absence of a soutache, the recurrent use on them of type CA cockades (**Table 1.5**), and, for the first time, eyelet washers routinely used inside-out (**Table 1.8**) and manufacturer stamps on the right-hand (or “wrong”) side of the cap (looking into the cap with the peak down). There are seven model 3_OR caps by Carl Halfar in the *Database*. All are dated 1942 but none are known to have been used in North Africa.

Bruno Kern

Bruno Kern made model 4_OR caps, of which there is single example in the *Database*, and model 4_O caps (**Figure 1.18**, right), of which there are eight. Only the model 4_OR cap is dated—to 1942—but given the similarity between the two models, the overall sparsity of officers’ caps attributable to 1942, and the presence in the model 4_Os of a manufacturer stamp rather than a number, the model 4_O caps are here attributed to 1942 as well. Many of the officers’ caps known are of large size and unworn, suggesting an origin in a store of unissued caps. None was definitely acquired in North Africa, but it is tempting to group them with other mint caps captured when Tunis fell to the allies in May 1943.

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Bruno Kern

Mützenfabrik

Fernruf 338

Lunzenau (Mulde)

To my eye, the Bruno Kern has a boxy appearance, probably resulting from the similar heights of the front of the false turn-up and the part of the brow above this. They are in fabric type RT.3; their insignia, which more often than not includes a type CA cockade, is hand-sewn (HS/HS); and they have two closely-spaced lines of stitching above the peak (2CS) and two intermediately-spaced lines of stitching on the underside, located close to the edge (2a). Where visible, the sweatbands on the officers’ caps are fashioned from black leatherette and green twill. That of the single ORs cap is fashioned from black leatherette and buff plain weave. Their eyelets are close together



and set back from the scallop in the false turn-up and, on all the caps in the *Database*, their interior washers are inside-out. At least three different variants of officers' silver piping are seen on the officers' caps, one similar to—or the same as—that on officers' caps by Lubstein and Kubach (**Figure 1.49**), the other two more loosely woven (**Figure 1.18**).

Model 4_O caps by Bruno Kern are distinguishable from those made by Karl Kubach, the only other manufacturer of the model (see below), by their shape, their fabric and their insignia application. Bruno Kern also stands out for its use of type CA cockades, sweatbands incorporating black leatherette, a feature also characteristic of 0/0843/0008 numbered caps (see below) but no other manufacturer, and the apparently standard fitting of its interior washers inside-out.

Karl Kubach

Model 4_O caps by Kubach in the *Database* (**Figure 1.67**) are much the same as the model 2_O discussed above (pp. 90–92), except for their lack of a soutache and their sweatbands, which comprise buff leatherette and green twill (ribbed and gabardine) reinforced by a strip of black material similar to that described for model 4_OR caps by Greiling (**Figure 1.66**, bottom), instead of brown leatherette and light green twill. Of the three in the

Figure 1.67

Model 4_O caps by Karl Kubach and 1942 Kubach manufacturer stamp.
 Photos: Fritz Kunz; VirtualGrenadier;
 WAF

Database, two retain clear 1942 date stamps (**Figure 1.67**, upper middle).

Kubach also made model 4_OR caps during this period, of which the *Database* includes one 1942-dated example. This is in a brown-looking variant of fabric RT.3 (Kurtz 2004, 124), and has the same above peak stitching as the manufacturer's model 4_O caps.

Another model 4_OR cap, which has lost its date may belong to 1942 or 1943. It is less well made than the manufacturer's model 4_O caps, but is otherwise very like them. It is in fabric type G, has the same insignia application, is stitched in the same way, has the same sweatband and the same zinc eyelets riveted in the same way.

56 F 42

Karl Kubach

Mützen-Fabrik

Mainz - Kastel

Mützen-Fabrik Dreßen

Apart from the absence of the soutache, model 4_OR caps by Mützen-Fabrik Dreßen (**Figures 1.68 & 1.69**) are more or less the same as model 2_OR caps by the manufacturer (see p. 94). There are three in the *Database*, all dated

Figure 1.68

Model 4_OR caps by Mützen-Fabrik Dreßen and Mützen-Fabrik Dreßen manufacturer stamp. Except that they never had soutaches, these caps are more or less the same as model 2_OR by the manufacturer. *Photos: Lee Greer; Military Antiques, Prague (inset); Barry Searson*





Figure 1.69

A model 4_OR cap by Mützen-Fabrik Dreßens worn in Italy in late 1943. This cap can be distinguished from a late Carl Halfar, with which Mützen-Fabrik Dreßens share some traits, by the light tone of the thread used to apply the insignia and the position of its eyelets. *Photos: Ed Cotton*



1942. It is not known whether they saw service in North Africa or not.

Mützen-Fabrik Dreßens can be distinguished from model 4_OR caps by Carl Halfar (**Figure 1.75**), with which they share a number of traits in common, by the colour of the thread used to apply their insignia, the position of their eyelets, which tend to be located further forward than on Halfars (**Figure 1.69**, bottom), their widely-spaced under-peak stitching (2Wb) and their sweatbands, which are of cotton twill rather than plain weave (**Table 1.7**).

H. u .W. Obenhack

The *Database* includes a single 1942-dated model 4_OR cap by Obenhack. It is in fabric type RT.2, the cockade is hand-sewn, it has two widely-spaced lines of stitching above the peak (2WS) and a single line of stitching on the underside of the peak (1b). The sweatband is of buff leatherette and cotton plain weave and its eyelet rivets are folded into its interior washers. It was acquired from a POW by a South African serviceman.

Resolut

There are six model 4_OR caps in the *Database* by Resolut (**Figure 1.70**), of which two have readable 1942 date stamps. They occur in fabric types G and IT and in three different colours: grass green, olive green and buff (the cap in fabric type IT). For the most part, their insignia application, the stitching above the peak and on the underside of the peak, their sweatbands and their eyelet riveting is the same as that already described for model 2_OR



Figure 1.70

Model 4_OR caps by Resolut and Resolut manufacturer stamp. *Photos: J-P Borg; Italian War Front; Military Antiques Stockholm; VirtualGrenadier; WAF*

caps by the manufacturer. On one cap, however, the eagle was machine or hand-sewn, flipped then finished using machine zigzag-lock stitch, a very rare feature in the tropical peaked cap. Another peculiarity is the use for the buff and one of the grass green caps of yellow-tan eyelets, which otherwise occur only on earlier tan-coloured model 1_O caps by Robert Lubstein (**Table 1.8**).

Georg Teufel

There are two caps stamped G. Teufel in the *Database*, both dated 1942. Both have been interfered with but were probably originally model 4_OR caps. The principal features of note include a sweatband of brown leatherette and buff plain weave and zinc eyelets riveted into a steel interior washer, the only 1942 dated occurrence of this feature in the *Database*. Both are in a variant of fabric type RT.3, both have two closely-spaced lines of stitching above the peak and the rivets of both are folded into their interior washers (**Figure 1.38**, bottom).

Alfred Valet

There are two model 3_OR caps by Alfred Valet in the *Database*, both dated 1942. Except that they do not have soutaches, and are in fabric type RT.3



instead of RT.2, these model 3_OR caps are much the same as the manufacturer's model 1_OR caps. Their eagles are hand-sewn and their cockades machine straight-lock stitched (HS/SL), they have two closely-spaced lines of stitching on the underside of the peak, set back from its edge (2d), and, where visible, their eyelet rivets are folded in-and-over their interior washers.

Vorwerk & Sohn

Vorwerk & Sohn made model 4_OR caps. There are four in the *Database*, all dated 1942. One of these (see Borg & Twiname 2010, 37) is believed to have been brought back from Tunisia by a US serviceman.

55 F 42

Vorwerk & Sohn

Wuppertal-Barmen

All are in fabric type G, have hand-sewn insignia (HS/HS), two closely to widely-spaced lines above the peak (2CS–2WS) and two intermediately-spaced lines on the underside of the peak, set well back from the edge (2d). Their sweatbands consist of buff leatherette and green cotton twill and their eyelet riveting is folded in-and-over, or over their interior washers (**Figure 1.71**).

Caps by Vorwerk & Sohn bare a superficial resemblance to 0/0384/0066-numbered caps, the insignia of which are applied in the same way and which have similar folded-over eyelet riveting. The two

Figure 1.71

Model 4_OR cap by Vorwerk & Sohn.
Photos: *Italian War Front*

can be distinguished by the fabrics used for them, their under-peak stitching and the their sweatband materials and colour.

1943

Ernst Kern

Kern was the only manufacturer of the model 5_OR cap, of which there are four in the *Database*. Kern did not date its caps but because they do not have soutaches and are stamped with a manufacturer name rather than a number, it assumed that they date to the end of 1942 or the beginning of 1943. It is unknown whether they saw service in Africa or not.

Ernst Kern

**Mützenfabrik
Lunzenau/Mulde**

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Model 5_OR caps have no false turn-up; otherwise they are the same as model 4_OR caps (**Figures 1.19 & 1.72**).

The four in the *Database* are in fabric type RT.3. Their eagles are machine straight-lock stitched, flipped, then hand-sewn, and their cockades machine-sewn using straight-lock stitch (HS_F_HS/SL). They have two closely-spaced lines of stitching above the peak (2CS), the upper of which clips the cockade, and a single line of stitching on the underside of the peak (1a–1b). Their sweatbands are of buff leatherette and buff plain weave and their eyelets are riveted in-and-over their interior washers. Several



Figure 1.72

Studio portraits showing the model 5_OR cap being worn. Neither photo is dated. The absence of the false turn-up is clearly visible. Note also the cockades, which appear oversized. *Photos: author's coll.*





appear to have oversized cockades (**Figure 1.72**) This, however, may be an optical illusion created by the absence of a false turn-up.

Bayer. Mützen-Fabrik 0/0850/0387

There are four model 4_OR caps in the *Database* by Bayerische Mützen-Fabrik with readable 1943 date stamps. These can be separated into two pairs, one in which the manufacturer stamp reads Bayer. Mützen-Fabr. München M/43 and which has steel eyelets riveted into zinc washers (**Figure 1.73**), and one which reads Bayer. Mützen-Fabr. München M/43, followed by the number 0/0850/0387 and which

Bayer. Mützen-Fabr.
München
M/43
0/0850/0387
53

has zinc eyelets riveted into zinc washers. Whether or not either of these variants saw service in North Africa is unknown, but, given the late dates of these examples, it seems unlikely. Caps with the name and number continued to be manufactured into 1944. Currently caps with just the number are unknown.

Figure 1.73

Unnumbered 1943-dated model 4_OR cap(s) by Bayerische Mützen-Fabrik, one of two cap variants produced by the manufacturer that year. This variant has steel eyelets riveted into zinc washers. *Photos: Harry Cliff; LTC (ret) Jim Pool*

The two unnumbered caps are fashioned from a variant of fabric type RT.2. Their insignia are hand-sewn (HS/HS); they have two closely-spaced lines of stitching immediately above the peak (2CS) and a single line of stitching on the underside of the peak (1b). Their eyelets, which have eight petals, are riveted into the interior washer; and their sweatbands are made from buff leatherette and buff plain weave (another cap without a date but thought to belong to this group has what looks like a green sweatband).

Figure 1.74

A Bayerische Mützen-Fabrik or—more probably—a 0/0735/0022-numbered model 4_OR cap. *Photo: author's coll.*



The numbered caps differ slightly from these and each other. They are in fabric types G and the aforementioned variant of RT.2. On one, the eagle appears to have been machine-sewn, flipped and then hand-sewn, and the cockade hand-sewn (SL_F_HS/HS), as on the model 2_OR cap by this manufacturer described on page 88. Their structural stitching is the same as on the unnumbered caps; their sweatbands are of buff leatherette and buff plain weave or buff leatherette and green plain weave; and their zinc eyelets, which have six petals, are riveted into their interior washers.

Both 1943 variants are clearly related to the manufacturer's 1942-dated caps but there are none the less significant differences between them, notably in their under-peak stitching and the unnumbered variant's steel eyelets. Collectively, they also resemble 0-0735-0022-numbered caps (**Figure 1.74**). When the caps in the *Database* are separated into unnumbered and numbered caps, however, the resemblance disappears and the caps by each become easily distinguishable.

Carl Halfar 0/0250/0906

There are 11 1943-dated model 4_OR caps by Carl Halfar in the *Database*,



Figure 1.75

1943-dated model 4_OR caps by Carl Halfar. Top left: name stamped caps in fabric type IT with zinc eyelets riveted into steel washers (cf. **Figure 1.38**, bottom). Bottom left & right: 0/0250/0906-numbered cap in fabric type G. Note the position of the stamp on the right-hand side of the cap, the black staining of the sweatband and the inside-out rivets. *Photos: Jonathan del Collo; Chris Kihotis; WAF*

six stamped with the Carl Halfar manufacturer name and five with the number 0/0250/0906. Since Halfar appears not to have made model 4_OR caps in 1942, another model 4_OR cap by the manufacturer in the *Database*, which has lost its date stamp, is also assumed to belong to this period (**Figures 1.6**, bottom & **2.7**, bottom). One 0/0250/0906-numbered cap is known to have been acquired at a POW camp in Egypt by a Canadian doctor (**Figure 1.75**, bottom left & right; Kurtz 2004, 154), but as far as is known, no model 4_OR caps by Carl Halfar saw actual service in Africa.

Except for the sweatband, model 4_OR caps by Carl Halfar are much the same as its model 3_OR caps.

Name-stamped examples occur in fabric types G (**Figure 1.6**, bottom & **2.7**, bottom) and IT (**Figures 2.7**, top & **1.75**, top left); and numbered examples in fabric types G (**Figure 1.75**, bottom left & right), what looks like RT.1, and RT.3. Both fabric types IT and RT.3 were new to the manufacturer. Insignia was applied using machine zigzag-lock stitch (ZL/ZL). On green caps, green thread was again used for this. All of the caps in the *Database* have two widely-spaced lines of stitching above the peak (2WS), the upper of which overlies the cockade, and two intermediately-spaced lines of stitching on the underside of the peak (2a–2b). Sweatbands are of buff leatherette, which in some cases has turned black (**Figures 1.6**, bottom & **1.75**, lower middle), and green plain weave. Most have zinc eyelets riveted into zinc interior washers. Some of the washers, however, are inside-out (**Figure 1.6**, bottom); while two caps in fabric IT have zinc eyelets riveted into steel washers (e.g. **Figure 1.75**, top left). Manufacturer stamps (names and numbers) occur on both the left and right sides of the cap.

Owing to the distinct zigzag-lock stitch used by Halfar to apply its insignia, there are relatively few caps with which its model 4_ORs can be confused. They can be distinguished from these by the type and colour of the zigzag-lock stitch used, the position of their eyelets, their under-peak stitching and their sweatbands.

Mützen-Häussler

Häussler is represented in the *Database* by a single 1943-dated model 4_OR cap. It is in fabric type RT.3. Its eagle is machine straight-lock stitched, flipped then hand-sewn; and its cockade machine straight-lock stitched (SL_F_HS/SL). There are two intermediately-spaced lines of stitching above the peak (2CS–2WS) and two closely-spaced lines of stitching on the underside of the peak (2Nc). Its eyelets, which are of zinc, are set back from the edge of the

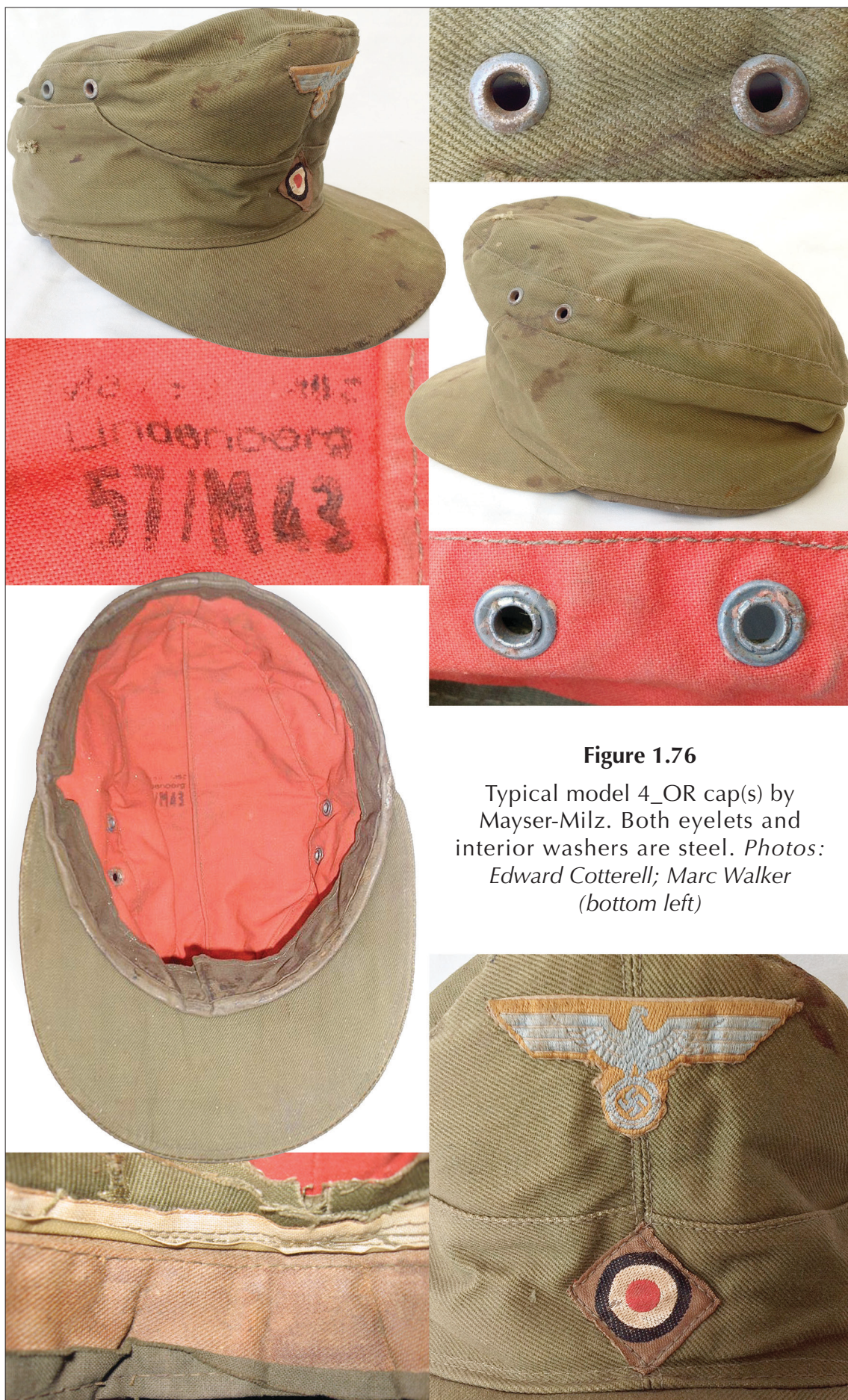


Figure 1.76

Typical model 4_OR cap(s) by Mayser-Milz. Both eyelets and interior washers are steel. *Photos: Edward Cotterell; Marc Walker (bottom left)*

scallop in the false turn-up and riveted in-and-over the interior washer. Its sweatband is of buff leatherette and green plain weave.

Aurel Huber

Aurel Huber made model 4_OR caps and is represented in the *Database* by two caps, both dated 1943. These are in fabric type RT.3. Only one retains its insignia: a hand-sewn eagle and a machine straight-lock stitched cockade (HS/SL). The eagle is of type ED.2, which is common unused, but rarely seen factory applied (**Table 1.4**). Hubers have two closely-spaced lines of stitching above the peak (2CS) and one line of stitching on the underside of the peak (1b). Their sweatbands are of buff (or greeny buff) leatherette and buff plain weave. One has zinc eyelets riveted into steel washers; the other steel eyelets riveted into steel washers.

Karl Kubach

The *Database* for 1943 includes two model 4_OR caps by Karl Kubach. One is identical to the undated model 4_OR Kubach described above (p.101), and has the usual type G fabric, insignia application, stitching, sweatband and eyelet riveting. The other⁴ is much the same but, instead of zinc eyelets with six rivet petals riveted over a zinc interior washer, it has steel eyelets similar to those used by Ottmar Reich (see **Figure 1.78**) with seven to eight rivet petals riveted over steel interior washers. Another, undated but presumably also late cap, has what appear to be six-petalled steel eyelet rivets. No 1943-dated model 4_O caps by Kubach (or indeed any other manufacturer) are known and it is assumed that this model had been discontinued by this date.

Mayser-Milz 0/0843/0012

Mayser-Milz made model 4_OR caps, of which there are nine in the *Database*, all dated 1943 (**Figure 1.76**). Mayser-Milz made caps stamped with the manufacturer name only and the manufacturer name and the number 0/0843/0012. Caps with just the number are currently unknown. No information is available about where any individual cap was acquired.

**Mayser-Milz
Lindenberg
57/M43**

While caps by Mayser-Milz share many traits in common—enough to enable us easily distinguish caps by the manufacturer—they also display some

⁴ This cap sports yet another eagle variant—ED.3—a cross between EC.4 and EC.8, details of which became available too late for inclusion in Table 1.4 and the discussion of eagles above.

variability. Most of those in the *Database* are in fabric RT.3. Their eagles are machine straight-lock stitched, flipped then hand-sewn; and their cockades machine straight-lock stitched (SL_F_HS/SL). The named caps have two closely-spaced lines of stitching above the peak (2CS); the numbered caps two intermediately-spaced lines of stitching above the peak (2CS–2WS). Both have a single line of stitching on the underside of the peak, often located quite close to the edge (1a–1b). Their sweatbands are usually of buff leatherette and green cotton plain weave (**Table 1.5**). More than half have steel eyelets and steel washers (**Figure 1.76**) but caps also occasionally occur with zinc eyelets and steel washers and steel eyelets and zinc washers (**Figure 1.37**, bottom right) (**Table 1.8**). In all cases the eyelet is riveted into the interior washer.



Figure 1.77

Late model 4_OR cap, possibly an Ottmar Reich (note the unusually large eyelet holes and the stitching above the peak). The photo is labelled: "Summer 1943 at the Kuban bridgehead". *Photo: author's coll.*

Other aberrations include: a numbered cap, which appears originally to have been buff, instead of the usual green, and has a wholly leatherette sweatband; a cap with green *painted* steel eyelets; and a cap with a buff leatherette and buff plain weave sweatband. Another aberration is the model 6_OR cap referred to above (p. 32) and discussed in **Appendix 3**, which has the unnumbered Mayser manufacturer stamp—or a copy of it—and shares some of the traits listed above.

H. u .W. Obenhack 0/0721/0074

A single 1943-dated model 4_OR cap by Obenhack in the *Database* is stamped with the manufacturer name and the number 0/0721/0074. It is in fabric type G, the eagle and cockade are hand-sewn (HS/HS), it has two widely-spaced lines of stitching above the peak (2WS) and a single line of stitching on the underside of the peak (1a–1b). The sweatband is of buff leatherette and cotton

plain weave and its eyelet rivets are folded into its interior washers. Except for its stamp and fabric it is almost identical to the 1942-dated cap by this manufacturer described above.

Ottmar Reich

There are seven model 4_OR caps by Ottmar Reich in the *Database*, all dated 1943 (**Figure 1.78**). One is of these reported to have been acquired in Italy. The cap shown in **Figure 1.77**, which I have identified as an Ottmar Reich, saw service in the Kuban, in the southern Soviet Union.

OTTMAR REICH

Lindenberg

M 43

57

Caps by Reich stand out because of their steel eyelets, which have unusually large holes, and rivets that fold over, rather than in, or in-and-over their interior washers.

All of the caps in the *Database* are in fabric type RT.3. They have hand-sewn insignia (HS/HS), a single over-sewn line of stitching above the peak (SO), and one—or very occasionally two—lines of stitching on the underside of the



Figure 1.78

Model 4_OR caps by Ottmar Reich. Note: the different under-peak stitching, (two lines on the cap to the left and only one on the cap to the right); the unusual brown leatherette; and the large holes in, and the eight rivet petals of, the steel eyelets. Photos: AKF; VirtualGrenadier

peak (1b–1c or 2b) (**Figure 1.78**, middle). Their sweatbands are of buff or brown leatherette (which can be hard to distinguish in photos) and buff plain weave.

Some later tropical peaked caps have eyelets like those used by Reich, but their only 1943-dated parallel in the *Database* is in a cap by Kubach, the traits of manufacturer of which are utterly different from those of Reich, and there is no question therefore of the two being confused.

August Schellenberg

There are two model 4_OR caps by Schellenberg in the *Database*, one dated 1943, the other without a visible stamp (**Figure A2.2**). A third came to light too late to be included in the *Database* or tables. All are in a variant of fabric type G. Their eagles are machine straight-lock stitched, flipped then hand-sewn; and their cockades machine straight-lock stitched (SL_F_HS/SL). They have a single to multiple over-sewn line of stitching above the peak (SO–M). The two in the *Database* have two intermediately-spaced lines of stitching on the underside of the peak (2b); the new cap, a single line of stitching on the underside of the peak (1b). Their sweatbands are of buff leatherette and green plain weave and in all three cases their eyelet rivets, which are folded into their interior washers, trap clumps of red lining material between them and the washer. All three caps also incorporate a conspicuous orange cotton, but in a different place in each cap.

55

August Schellenberg
Uniformmützenfabrik
Bromberg

1943

Willy Sprengpfeil

Sprengpfeil is represented in the *Database* by a single 1943-dated cap about which there is currently no useful information.

Herbert Straube

There are four model 4_OR caps by Straube in the *Database*, two with a name stamp, both 1943-dated, one with an unreadable number and one with no surviving trace of a stamp at all, but which shares the same set of traits of manufacturer as the as the stamped caps. None has a known provenance.

Straubes are notable for their high fronts, the frequent sewing of their cockades *through* the lining of the cap, their steel eyelets, which are riveted into their interior washers, and their buff leatherette and plain weave sweatbands (**Figure 1.79**). The four in the *Database* are in fabric types G,

RT.2 and RT.3. Their eagles are hand-sewn; and their cockades—one of which overlaps the top of the false turn-up—machine straight-lock stitched (HS/SL). Three of the four caps in the *Database* have two closely-spaced lines of stitching above the peak (2CS) (on the other, they are so close as to form a single over-sewn line: SO), and all four, two intermediately to widely-spaced lines on the underside of the peak (2b–2Wb). At some time, two of them have had their sweatbands partially cut away, but nothing about the morphology of any of the caps suggests this is anything other than a coincidence.

M43

Herbert Straube
MUTZENFABRIK
Annaberg i. Erzgeb.

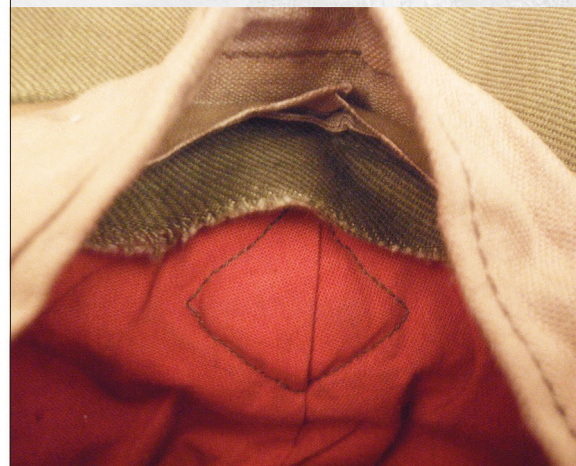
55

Alfred Valet

There is one model 4_OR cap in the *Database* by Alfred Valet and it is dated 1943. This cap is very like the model 1_ORs and model 3_ORs by Valet described above, except that it is in fabric type RT.3, instead of the more usual RT.2, and has a sweatband of brown leatherette and buff plain weave. Its shape, insignia application, under peak stitching

Figure 1.79

Model 4_OR cap by Herbert Straube. Unusually the cockades on Straubes are stitched through the caps' linings. Photos: Fred Green; WAF



and eyelets (the interior washers of which are inside-out) are the same. The base of the cap was “finished” before the sweatband was added. I would suggest therefore that this cap was in fact made as model 3_OR and then converted into a model 4_OR.

Wolber & Plaff

The *Database* includes two model 4_OR caps by Wolber & Plaff, both dated 1943. They are in fabric type RT.3. Their insignia are hand-sewn (HS/HS), they have two closely to intermediately-spaced lines of stitching above the peak (2CS) and a single line of stitching on the underside of the peak (1b–1c), and their eyelets, which are zinc, are riveted into their interior washers. The manufacturer stamps in the two caps, however, use different fonts and cases; and they have different sweatbands, in one case comprising brown leatherette and buff plain weave, and in the other, brown or grey leatherette and green plain weave.

0/0496/0340

The 0/0496/0340 is one of the most common makes of numbered cap. There are nine in the *Database* (20% of the total of numbered caps), all model 4_ORs and all clearly stamped and dated 1943 (**Figure 1.18**, left). Because its traits of manufacture, which are very consistent, do not overlap with those of any currently known named manufacturer, the number 0/0496/0340 is assumed to represent a new maker of tropical peaked caps. Two manufacturer stamps are known. In one the number is underlined (**Figure 1.4**, bottom); in the other, it is boxed.

Whether or not 0/0496/0340-numbered caps, or indeed any other numbered caps reached Africa, is unknown. The consensus of opinion is that they did not but this is based on circumstantial evidence only—the lag between manufacturer and service in-theatre identified for earlier caps, the 1943 date on most numbered tropical caps in the *Database* (a single numbered cap only has an earlier date) and the lack of 1943-dated caps, numbered or otherwise, amongst veteran souvenirs from the region.

All the 0/0496/0340-numbered caps in the *Database* are in fabric type RT.3. Their eagles are hand-sewn and their cockades machine straight-lock stitched (HS/SL). They have a single over-sewn line of stitching above the peak (SO) and a single line of stitching on the underside of the peak (1b). Their sweatbands are of buff leatherette and green plain weave, and their eyelets, which are zinc and include examples enameled in tan, olive tan and green (**Figure 1.31**, bottom right), are riveted into their interior washers. There is no correlation between the different eyelet colours and the different stamps.

0/0520/0017

The *Database* includes six 0-0520-0017-numbered model 4_OR caps, of which five retain their stamps and are dated 1943. Several of these caps have been interfered with (e.g. **Figure 2.43**) and as a result it is uncertain how all

of their insignia were originally configured. Possibilities include hand-sewn eagles and cockades (HS/HS), zigzag-lock stitched cockades, hand-sewn eagles and machine straight-lock stitched cockades (HS/SL), and—uniquely for 1943-dated tropical peaked cap—straight-lock stitched, flipped then straight-lock stitched eagles, applied as untrimmed triangles, and straight-lock stitched cockades (SL_F_SL/SL).

All of the 0-0520-0017-numbered caps in the *Database* are in fabric type G. They have a single over-sewn line of stitching above the peak (SO) and two, usually closely-spaced lines of stitching on the underside of the peak (2Nb–2b). Their sweatbands are of buff leatherette and green cotton plain weave and their eyelets, which are zinc, are riveted into their interior washers. In the single manufacturer stamp known, the number is preceded by the abbreviation “RB-Nr.”

0/0669/0036

The number 0/0669/0036 is represented in the *Database* by four 1943-dated model 4_OR caps. These form two pairs of related, but slightly different caps, each of which has a different stamp: one with the date, size and manufacturer number separated by lines; and one in which these are in three conjoining boxes. In both stamps, the manufacturer number is again preceded by the abbreviation “RB-Nr.”

The two caps with unboxed stamps are in fabric type G. Their eagles are machine straight-lock stitched, flipped and hand-sewn, and their cockades are machine straight-lock stitched (SL_F_HS/SL). They have two intermediately-spaced lines above the peak (2CS–2WS), the upper of which overlies the lower corner of the cockade, and two widely-spaced lines of stitching on the underside of the peak, set well back from the edge (2Wb). Their sweatbands are of buff leatherette and fine green cotton plain weave and their eyelets are folded into their interior washers.

The two caps with boxed stamps are in fabric type RT.3. One has an integral soutache and integral officers’ piping, and though retaining many traits listed below, is assumed to be a complete reconstruction.

The insignia of the other cap is applied in the same way as on the 0/0669/0036-numbered caps with unboxed stamps (SL_F_HS/SL); the upper line of stitching above the peak also overlies the lower corner of the cockade; it has two widely-spaced lines of stitching on the underside of the peak, set well back from the edge (2Wb); and its eyelet rivets are folded into its interior washers. But the lines of stitching above the peak are more closely-spaced (2CS), and it has a sweatband of buff leatherette and green twill, instead of buff leatherette and green plain weave.

0/0678/5015

0/0678/5015 made model 4_OR caps, of which there are two variants in the *Database* with three different manufacturer stamps, two undated and one incorporating a July 1943 (7/43) date stamp (**Figure 1.80**; see also **Figure**



Figure 1.80

Two variants of the 0/0678/5015-numbered model 4_O cap (top, upper middle and left, and lower right) and three different 0/0678/5015 manufacturer stamps. The combination of narrow zigzag-lock stitched insignia and very widely-spaced under peak stitching is closely paralleled in *Kriegsmarine* caps by Franz Ritter of Dettingen, indicating that the two manufacturers are one and the same. The faded name stamp in the bottom left photo is that of a theatrical costumier, not a manufacturer stamp. *Photos: Gus Abel; Nole Bolinger; Edward Cotterell; the Saleroom; WAF*

1.20, bottom). One of these variants, which occurs stamped with one only of the undated number stamps (**Figure 1.80**, lower middle left & bottom right), closely resembles named-stamped *Kriegsmarine* tropical peaked caps by Franz Ritter of Dettingen and some 0/0678/5015-numbered *Kriegsmarine* caps, while the dated stamp, which occurs in the other cap variant only, is identical to the stamp in the numbered *Kriegsmarine* caps (**Figure 1.80**, bottom left). It is likely therefore that 0/0678/5015 and Ritter are one and the same. There are nine 0/0678/5015-numbered caps in the *Database*, four of the Ritter parallels and five of the other variant, making the 0/0678/5015 another of the most common makes of numbered cap.

All those in the *Database* are in fabric type G.

The undated Ritter parallels have narrow zigzag-lock stitched insignia (NZL/NZL) or a narrow zigzag-lock stitched eagle and a straight-lock stitched cockade (NZL/SL). (A single hand-sewn eagle on one of these is assumed to be a replacement). They have two closely-spaced lines of stitching above the peak (2CS) and two very widely-spaced lines of stitching on the underside of the peak (2Wc) (**Figure 1.80**, lower middle right). Their sweatbands are of buff leatherette and green twill (gabardine or ribbed) and—possibly—buff leatherette and green cotton plain weave, and their eyelets, which are either wholly zinc or zinc with a steel washer, are riveted into their interior washers.

The dated caps and the other undated cap(s) have narrow machine zigzag-lock stitched insignia (NZL/NZL), a single over-sewn line (SO) or a two closely spaced lines of stitching above the peak (2CS–M) and a single line of stitching on the underside of the peak (1b) (**Figure 1.80**, lower middle left). Their sweatbands are of buff leatherette and green ribbed twill, and their eyelets, which, like those of the Ritter parallels, are either wholly zinc or zinc with a steel washer, are riveted into their interior washers.

0/0735/0022

Manufacturer 0/0735/0022 is represented in the *Database* by three 1943-dated model 4_OR caps, all slightly different. A complete set of data is available for one of these only. This is in fabric type RT.3. Its eagle is machine straight-lock stitched, flipped and hand-sewn, and its cockade hand-sewn (SL_F_HS/HS). It has two intermediately-spaced lines of stitching above the peak (2CS–2WS), and one line of stitching on the underside of the peak (1b). Its sweatband is of buff leatherette and green plain weave and its eyelets, which are steel, are folded into zinc interior washers. The other two are also in fabric type G;



Figure 1.81

0/0735/0022-numbered model 4_OR cap. Photos: Martin Hall

have machine straight-lock stitched, flipped and hand-sewn eagles; and eyelet rivets that are folded-into their interior washers. One also has a hand-sewn cockade; and one, a single line of stitching on the underside of the peak. But their sweatbands are of grey leatherette and green plain weave and—possibly—buff leatherette and buff plain weave, and their eyelets wholly zinc and wholly steel.

0/0843/0008

There are four model 4_OR caps in the *Database* with the number 0/0843/0008, all dated 1943. Another can be attributed to the group on typological grounds, the traits of manufacturer of the 0/0843/0008 being more than usually consistent for a numbered cap. One is known to have been acquired by a US soldier in Italy (**Figure 1.81**); another was brought home from an unknown location by a New Zealander.

All five are in fabric type RT.3. Their insignia are hand-sewn (HS/HS). They have a single over-sewn line of stitching above the peak and, where visible, a single line of stitching on the underside of the peak (1b). Their sweatbands are of dark grey leatherette and green twill (3 caps) or buff leatherette and green twill (1 cap). All five have zinc eyelets which, where visible, are riveted tightly into zinc interior washers.

0/1156/0018

The *Database* includes two model 4_OR caps numbered 0/1156/0018, preceded by the abbreviation

Figure 1.82

0/0643/0008-numbered model 4_O cap acquired by a US soldier in Italy.
 Photos: Chris MacMillan/ WRF

RBNr., both dated 1943. They are in a variant of fabric type G. Their insignia are hand-sewn (HS/HS). They have two closely-spaced lines of stitching above the peak (2CS) and a single line of stitching on the underside of the peak (1a–1b). Their sweatbands are of buff leatherette and green plain weave. One has steel eyelets riveted into steel interior washers; the other steel eyelets riveted into zinc washers. Neither has a known provenance.

0/0384/0066

There are four model 4_OR caps in the *Database* with the number 0/0384/0066, none of them dated. The manufacturer number is preceded by the abbreviation “RF Nr.”, rather than “RB Nr.”, a distinction that may—though this is not currently proven—have implications in terms of the caps’ exact dating. On current evidence, they could belong to late 1942, 1943 or 1944.

Except for their eyelet colour and under-peak stitching these caps are very similar. All are in fabric type RT.3; all have hand-sewn insignia (HS/HS) and two widely-spaced lines of stitching above the peak (2WS), the upper of which overlies the cockade; all have sweatbands of buff leatherette (of which frequently only a little shows) and buff plain weave; and all have zinc eyelets, which are riveted over their interior washers (**Figure 1.83**).



Their eyelets are green (3 caps) and tan (1 cap) and on the underside of the peak, they have one line of stitching (1 cap) or two intermediately-spaced lines of stitching (2 caps), in both cases located quite close to its edge (1a or 2a).

Other numbers

1943-dated model 4_OR caps also occur numbered 0/1316/0014, 0/2009/0004 and 1/0250/2487. The stamps on different variants of the latter incorporate the “workshop” numbers 11 and 12 (cf. Lago and Lago Mitteldeutschland). Uniquely amongst the numbered caps in the *Database*, one apparently authentic 1/0250/2487-numbered cap with the workshop number 12 is dated 1942. At the time of writing, insufficient data about any of these caps is available to present to any purpose.

INTERPRETATIVE SUMMARY

The main interests of this paper interpretatively are the traits of manufacture of the tropical peaked cap, and how these can be used to distinguish, firstly, caps by different manufacturers and, secondly, real caps from fakes. However, other points of interpretative interest have arisen, relating to resource procurement, design, and supply logistics; and to cap *meaning*.

Figure 1.83

0/0384/0066-numbered model 4_OR caps. Note the “RF”, as opposed to “RB”-number. *Photos: Jessen’s Relics; VirtualGrenadier; WAF*



Certainty regarding the first is difficult to come by. There are too many questions that the current *Database* is not up to answering. But it does provide some useful clues. These include the chopping-and-changing of manufacturers and the materials used by them, the evidence for a deterioration in cap quality over time, the design changes the cap underwent after 1940, when it was first manufactured, and the many modifications individual caps underwent, the distribution of production, first limited to a few firms concentrated in a restricted geographic region, then much more extensive (McGuirk 2014a), and the lag between cap manufacture and use in-theatre. Clues to cap meaning, lie in the high regard in which it was held by the soldiers who wore it,⁵ its popularity as a souvenir, and the high prices now realized for it as a collectable.

The 1941 to 1943 dispersal and expansion of cap production was certainly a response to the escalating deployment of the German army in North Africa and the demand for tropical uniforms generated by this. Indeed both it and other changes highlighted here, such as the disappearance from the record of tropical caps by, for example, Robert Lubstein, a company which we know did not go out of business, but continued till the end of the war as a major manufacturer of visor caps, are best interpreted as a straight-forward expression of supply and demand and the everyday response to this of a capitalist market economy, with companies such as Lubstein and its successors competing for and juggling different contracts. However, given the evidence for a lag between cap manufacture and use in-theatre, demand appears also to have been anticipatory of further deployments, some of which never happened.

Experience of war in the desert is reflected in changes in the design of the cap, such as the introduction of the sweatband in 1942 and—perhaps—a change from “stiff” early fabric types, which were later described as unsuitable for use in the North African climate (Toppe 1991 [1952], 8), to “lighter” fabric types.

Logistical strain on the German war effort and strategies to counter this, both in-theatre and at home, is also evidenced, and for the whole of the campaign. We see it first of all in the inconsistent use of materials in the earliest tropical caps, such as different coloured twills and Continental eyelets, in a shortfall in General officers’ caps (**Appendix 1**), in the *ad hoc* modification of army caps for use by *Luftwaffe* troops and in the field addition or replacement of difficult to supply design features such as the soutache and silver officers’ braid. Then later, we see it in the abandonment of some of these features, in a diminution in quality control—the sloppy manufacturer of 1942 caps by Schlesische Mützenfabrik and 1942 and 1943 caps by Halfar, when compared to their earlier product—and in the use of new, (?)alternative, materials, such as bare steel for enamelled zinc in eyelets and rayon for cotton in insignia.

⁵ One *Afrikkorps* veteran is reported to have described it as “*unsere brave Afrikamütze*” (our brave Africa cap) (D. McGuirk pers. comm.).

Despite all this, however, the overall impression is of triumph of supply by Germany's cap manufacturers and quartermasters in the face of increasing adversity.

Any assessment of the meaning of the *Afrikamütze* will of course be subjective but that it had meaning and continues to have meaning and is therefore important in terms of our wider understanding of the campaigns in which it was worn, the men who wore and souvenired it, and the collecting of it subsequently, is inescapable.

CONCLUSION TO PART 1

When he collated his *German Experiences in Desert Warfare during World War II* for the US army, General Alfred Toppe described the tropical peaked cap as "excellent... the visor indispensable for the infantryman and for the gunner as protection against the intense glare of the sun", whereas the uniform generally was characterized as "unsuitable in both style and material" (Toppe 1991[1952], 8–9). The cap was popular with the troops (McGuirk 1987, 141), and, judging by the very large numbers that have survived, a favourite souvenir of soldiers on both sides. Continuing interest in it is shown by the many photos of them posted online (see **Digital Appendix 1**) and the many ResearchGate views early drafts of my own work on them have received. The cap's meaning, however, has changed over the years. From a useful piece of kit, it has become a source of evidence for the procurement strategies of the *Wehrmacht*, and from a reminder of a particular formation and a particular theatre, it has become a charismatic emblem of a romantic campaign and, as such, a highly-prized, pricey and much faked collectible. For these reasons, it is worthy of study.

My work on it is based on the assumption that different combinations of cap traits are diagnostic both of different cap manufacturers and cap dates, and can be used to identify these and distinguish real caps from fakes. Part 1 of this essay separates out and describes these traits (p. 5–67), the object of this being to clarify their exact nature and interpretative role. Then it re-sorts them by date and manufacturer (p 68–122), the object of this being to provide a catalogue of authentic caps against which individual caps—real and fake alike—can be compared. Highlighted are the different proportions of cap traits and their first appearance in the record and the implications of these for our understanding of cap manufacturer, issue and use. Many of the traits and sets of traits discussed, have been discussed before. But this is the first time a discussion of them has been presented as a single coherent whole. Others are discussed—or at least elaborated upon—for the first time. All this makes it a useful contribution to our understanding of the cap. Fakers rely on the ignorance, inattentiveness or blind enthusiasm of their customers to pass off their fakes; and the only way to check them is to educate the latter. Part 1 of this essay, is one stage in that education. It also provides a possible template for other studies of this sort; and in so far as it

reveals certain trends of manufacture and use, it represents a first—albeit tentative—stage in their study.

For the essay to be truly useful, however, we must acknowledge its shortcomings as well as its successes.

One reader of an early draft of it blithely informed me that it revealed how much I do not know, rather than how much I do know, and summed-up the inferences I had drawn with the expression “Garbage in, garbage out”! These comments are the expression of a point of view, which sees little point in analyses based primarily on online sources, and is uninterested in the minutiae with which I choose to work, and I of course reject them. That said, there were and continue to be problems with both my sources and my approach. First of all, a database of 340-odd caps, out of the many thousands originally made is tiny, and there are likely to be caps out there by manufacturers of which I am unaware and there definitely are caps out there by manufacturers of which I am unsure (**Appendix 3**). It is also true that photographs, and indeed examination with the unaided eye, are insufficient *by themselves* always to convey to the student of the tropical peaked cap everything he or she needs to know in order to place one accurately. And for some caps in the *Database*, I don’t even have a complete set of these. Finally, not all issue caps conform to what is expected of them, and in these cases, it is not detail that is required in order to place them, but a broader comparison with the *koine* as a whole. This essay therefore is a start only. There will be omissions, in places I generalize, and it is possible that my reading of the data has resulted in the incorporation within it of errors of fact, which will inevitably have led to errors of interpretation. The reader—particularly the reader interested in a particular cap, rather than tropical peaked caps in general—should bare this in mind.

So what next? Part 2 of this essay addresses the issue of fake tropical peaked caps in detail, and the appendices, the General Officers’ cap (**Appendix 1**), caps of uncertain identity (**Appendix 2**) and the relationship of the tropical sidecaps or *Schiffchen* to the tropical peaked cap (**Appendix 4**).

Future work on it will relate primarily to the omissions touched on above, in Part 2 and in the appendices. Three of these in particular stand out: the identification of the missing/ unconfirmed cap manufacturers, work on cap and peak shape, and the final ordering of the insignia grouped above under early, intermediate and late. I would also like to see more work on the General officers’ cap and—related to this—tailor-made caps, and ascertain whether cap model 6_OR is an authentic variant or not. All these topics could be usefully addressed through the examination of more and better photos, which, given time, there is every reason to believe will become available. Otherwise, the potential of these study areas will only be realized through an examination of the caps themselves. For example, a closer examination of the caps would enable us to cross-reference data on fabrics with information given in manufacturer stamps about place and region of manufacture (designated by name and/ or number), clothing depot (designated by a letter)

and month of manufacture (designated by a number)—a topic not touched upon here because the study of photos alone is not up to the job. Finally, it is high time that surviving stories surrounding the original use and acquisition of these caps and any related archival data are collated. In these lie not only their use context but also their all-important meaning.



AUTHOR'S REQUEST

The use of photographs from the many contributors to this essay has proved invaluable. But the never ending search for new material continues. Currently I am seeking photos taken by Wehrmacht and allied personnel showing the architecture and topography of Italian Libya and everyday life in the colony during WW2 for a future essay exploring the contribution of its wartime visitors to the preservation of this lost past. Needed are high resolution scans, or original photographs, which I would either purchase or scan myself. Full credit will be given for photos used in the essay. Many thanks for your help.

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